
ONLY £1.85
NEW
CPC Attack!
NO.2 JULY 1992
THE CRUCIAL AMSTRAD CPC READ!
REVIEWS:
STRYKER IN THE CRYPT OF TROGAN * PUZZNIC * PRO-TENNIS TOUR * MANCHESTER UNITED
COMPLETE CONTROL
FIVE PAGE GUIDE TO RAINBOW ISLANDS
THE WORD IS...
THAT WE'VE GOT THE LOW-DOWN ON THE BEST CPC TEXT PROCESSORS!
ART ATTACK
PAINTING ON THE CPC
GET IN TO ART
CONSOLE CRAZY
SUPER NES REVIEWED INSIDE WITH SUPER MARIO WORLD, SUPER R-TYPE, SUPER SOCCER, SUPER TENNIS, AND F-ZERO
SPLUG!
FREE AMY PUZZLE GAME
FREE
POSTER INSIDE
WIN
THE SUPER NINTENDO AND FOUR GAMES WORTH OVER 300 SMACKERDONIES!
9 770965 719002 07

EDUCATIONAL

FUN SCHOOL

Fun School is probably the best selling Educational range ever written. Each range increasing in sound and graphics capability. All ranges are different.

Fun School 1 – 10 programs per disk

For 2 to 5 years	6.95
For 5 to 7 years	6.95
For 8 to 12 years	6.95

Fun School 2 – 8 programs per disk

For 2 to 6 years	8.95
For 6 to 8 years	8.95
For 8 to 12 years	8.95

Fun School 3 – 6 programs per disk

For 2 to 5 years	11.95
For 5 to 7 years	11.95
For 7 to 12 years	11.95

New – Fun School 4 – 6 programs per disk

For under 5 years	11.95
For 5 to 7 years	11.95
For 7 to 11 years	11.95

KOSMOS SOFTWARE

Language Tutors: – contains over thirty lessons, with over 2500 words. Aimed at GCSE level.

French Mistress (12-adult)	15.59
German Master (12-adult)	15.95
Spanish Tutor (12-adult)	15.95
Italian Tutor (12-adult)	15.95

Answerback Junior Quiz (6-11 years) –

750 general knowledge questions	10.95

Factfiles (require Answerback quiz)

Factfile Arithmetic (6-11 years)	7.95
Factfile Spelling (6-11 years)	7.95

TRIPLE R SOFTWARE: – PICTURE BOOK: A new title featuring four Educational games covering the Alphabet, Counting, Spelling and Snap – using pictures to illustrate the answer. **MJC PRICE £14.95**

For more information on the Educational programs ask for the MJC Educational Supplement

LCL SOFTWARE

This is a range of Educational software produced by practising teachers, features up to 35 programs per pack with a good "step by step" approach.

LCL Primary Maths (3-12)	19.95
LCL Micro Maths (11-GCSE)	19.95
LCL Micro English (8-GCSE)	19.95
LCL Mega Maths (A-level)	19.95

PRISMA SOFTWARE!

Learn to Read with Prof (age 4-9 years)

Part 1: Prof Plays a New Game	14.95
Part 2: Prof Looks at Words	14.95

KEYS TO PLEASE

Young children don't understand CAPITAL LETTERS – as on the keyboard. Keys To Please is a set of animated keyboard stickers showing Lower & Upper case.

Keys to please £3.95

or £2.95 if ordered with other goods

ACCESSORIES

DKT 64k Memory Expansion (464)	39.95
Multiface 2 Plus (for CPC)	39.95
Multiface 2 Plus (Plus models)	42.95
8 bit printer port (inc. lead)	24.95
CPC to Parallel printer lead	9.95
CPC plus to parallel lead	6.95
464 Keyboard-Monitor Ext leads	7.95
6128 Key/Monitor Ext leads	8.95
NEW - 6128+ Key/Monitor Ext leads	7.95
FD1 Disc Drive lead (664/6128)	7.95
464/6128 Monitor/keyboard covers	7.95
464/6128 Plus dust covers	8.95

(please state exact machine - col/mono)

JOYSTICKS

suitable for all CPC computers
(note: autofire does NOT work)

Quickjoy 2 Standard (M/sw)	6.95
Quickjoy Python	8.95
Quickjoy Python 1M (M/sw)	9.95
Konix Navigator (M/sw)	11.95
Comp Pro 5000 Black (M/sw)	13.95
Quickjoy Superboard (M/sw)	16.95
Quickjoy Topstar (M/sw)	19.95

* – M/sw denotes microswitched

CASSETTE BASED

Fun School 2 (2-6 years)	6.95
Fun School 2 (6-8 years)	6.95
Fun School (over 8)	6.95
Fun School 3 (2-5 years)	8.95
Fun School 3 (5-7 years)	8.95
Fun School 3 (over 7)	8.95
Fun School 4 (2-5 years)	9.95
Fun School 4 (5-7 years)	9.95
Fun School 4 (over 7)	9.95
Maxam 464	15.95
Protext 464	15.95
Mini Office 2	9.95
Advanced Art Studio (128k)	15.95

NEW PRODUCTS

COLOURDUMP 3

The latest release of this COLOUR screen dump utility. Now offers large or small screen sizes, plus will now automatically read an Advanced Art file. Also features a Multiface screen conversion routine which will enable printing of most of your saved screens.

NO OTHER COLOUR DUMP OFFERS SO MUCH!

COLOURDUMP 3 £15.95

Requires a CPC 6128/6128 Plus and a Star Colour printer – or compatible

NIRVANA

Possibly the best disc back up software for the CPC. Also features several useful disc utilities – Fast Format, File Erase, File Copy, Sector Editor and Disc Map. No serious CPC user should be without this one.

MJC PRICE: on Disc £14.95
on Rom £25.95

WARNING: for disc back up only – must not be used to infringe Copyright laws.

STAR DUMP

Coming soon – (due beginning May)

This excellent screen dump utility has been written specifically to take full advantage of the 24 pin print quality. Will read Advanced Art files and Spectrum screen files and will also activate any of the popular 8 bit ports (if fitted). Various screen sizes, fast and excellent quality – what more could you want?

MJC PRICE £14.95
call for availability



COMPUTER SUPPLIES

Suppliers of Discount Software since 1984

HOW TO ORDER:
All prices include VAT & delivery
Send cheques or postal orders made payable to:

MJC SUPPLIES (ATT)
Unit 2, The Arches, Icknield Way,
Letchworth, Herts, SG6 1UJ

Or telephone with Access or Visa debit and credit cards on:
0462 - 481166

Overseas Customers: write for quotation
Educational Bodies, Local Authorities, Govt. Departments: send written order
FAX US ON 0462 670301

CPC CREW

The wicked words:

EDITOR
Pat Kelly
SUB-EDITOR
Lisa Davis
CONTRIBUTORS
Bob Adams, Vic Barnes, Glynne Davies, Richard Fairhurst, Vik Olliver
Q&A CONSULTANTS
Vic Barnes, Glynne Davies, Simon Watson

The hardcore art:

ORIGINAL DESIGN
Steve Hicks
DESIGNER
Paul Ellis
DESIGN CONTRIBUTORS
Kate Bowen
Sarah Collins
ILLUSTRATOR
Stuart Harrison

The groovy ads:

GROUP AD MANAGER
Alan Talbot
AD MANAGER
Richard Vaughan
ASST. AD MANAGER
Liz Edgar

Getting it all together:

PRODUCTION MANAGER
Neville Lloyd
PRODUCTION CONTROLLER
Jayne Penfold
PRODUCTION EXECUTIVE
Rachel Dixon

The management:

GROUP EDITOR
John Taylor
PUBLISHING DIRECTOR
Wendy Palmer

DEPUTY MD CONSUMER MAGAZINES & MARKETING SERVICES
Ray Lewis

MD CONSUMER MAGAZINES & MARKETING SERVICES
Peter Welham

CPC ATTACK,
Floor 3, Greater London House, Hampstead Road, LONDON NW1 7QQ
Tel: 071 388 3171
Fax: 071 387 9518

PRINTED BY
BPCC, Colchester.

CPC ATTACK comes from HHL Publishing who publish far too many magazines to list here.

ABC
When you're this good, who needs 'em?

SPECIAL THANKS
To all the backroom boys who helped out and to everyone else that knows us.

CONTACT

Is there something we should know? Need help on technical matters or games? Want to get something out in the open? Then you need a contact.

You can be certain of getting your enquiry answered within the magazine if you address your letter to the right person or department. We can't personally reply to enquiries, either by telephone or post, but, you can reach us by writing to, or faxing the listed departments at:

CPC ATTACK!, HHL Publishing, Floor 3, Greater London House, Hampstead Road, London, NW1 7QQ
or
FAX: 071-387-9518

P.S. If you have a problem with any advertising company in the magazine, you can always call our advertising department as long as it's between normal working hours. They are always available to help with your problems.

CPC Q&A
Always ready to answer your problems, the technical help section is crammed with helpful advice, tips and readers' problems. If you have any advice or handy tips to offer, send them in - prizes awarded for every tip.

LETTERS
If you ever feel the need to express yourself, want to tell the world how wonderful you are, how crap a program is or if you wish to join in the topical forum, then get scribbling.

SUBMISSIONS
We are always on the look out for interesting and topical articles for publication. If you have a special set-up, or know of a special utility, you could write an article about it for CPC ATTACK! You could become a regular contributor, earning lots of money for your work.

PROGRAM LISTINGS
Listings and 10-Liners are superb learning ground for would-be programmers, and they also provide excellent utilities and games. In CPC ATTACK, all listings are treated as submissions and, as such, contributors are paid real cash. Please remember to include a disc or tape with the listing on it!

AMY'S PMT
Whether you want to give pokes, maps, tips (and cheats) or want to get some, this is the place to do it. Lotsa prizes to be won each and every month for the best submissions published.

CLASSIFIED
Not only for getting rid of your old equipment and grabbing a great bargain, but also for CPC contacts and user groups. The best way to sell your product.

COMPETITIONS
Lots and lots of COMPO's. That's what we'll be striving to offer. You can win quite easily, but you'll have to get your entry into the correct hat! Any competition wrongly addressed goes straight into the dustcart.
Don't put any letters or tips into a competition submissions as we don't open them other than to check if a winner's answers are correct.

CPC ATTACK! DIRECT
If you want to place an order, or have any problems with the service then please write, or call 071-388-3171 and quote CPC ATTACK! DIRECT.

SUBSCRIPTIONS
The subscription department is in a totally different office at a completely different location. If you want to subscribe or notify of a change of address you can send off your details to the address below:
CPC ATTACK SUBSCRIPTION,
HHL Subscription Department, Lazahold Ltd., PO Box 10, Roper Street, Pallion Industrial Estate, Sunderland, SR4 6SN.
TEL: 091-510 8787
FAX: 091 510 0155

CPC Attack!

Welcome to CPC ATTACK!

Judging by the response we're already a big success. Hopefully, we're giving the right vibes. Were certainly getting plenty back!
There's a lot in ATTACK!, but some have complained about the coverage of consoles in Console Crazy. At 68 pages we already out-page Amstrad Action by a whopping 8 pages, so we feel that 3 or 4 pages on consoles isn't that bad, especially since we believe that many of you own consoles, or are thinking about it! Not only that, but you're getting better console coverage here than you would there! Where? Well, all the other console magazines are trying to please their audience. If you're trying to decide what's best, then listen to our in-depth machine and market reports, 'cos we're trying to figure out what's really best too!
On the CPC front, what about sending in some more surveys. Also letters telling us what you think of anything; Life, hardware, consoles...it's your magazine and if you're not interested then sod off!

REGULARS

CONTENTS



SERVICES

MEET AMY STRADAVARIUS
What with posing for two covers, dressing up for the game portraits, and playing the Super NES - we couldn't get her off it - Amy's been pretty busy all-round.

SPECIALS

3.5" Mega Drive £79.95

(Including FREE MS800)

FEATURES:

- ★ 800K per disc when used with MS800 (supplied FREE), RAMDOS, ROMDOS, or RODOS.
- ★ DUAL MODE: Mode 1 - The Mega Drive is a complete alternative B drive. Mode 2 - The Mega Drive will also format up to 800K per disc.
- ★ SIDE SWITCH switches the disc between side A and side B of your 3.5" disc
- ★ EXTERNAL PSU The power supply is external, and should the need ever arise is easily replaceable.
- ★ MULTI-COMPATIBLE The Mega Drive is compatible with almost all other computers, so that if you change your computer you can transfer your Mega Drive. Only a different lead and connector are required.
- ★ COMPACT SIZE The Mega Drive measures only 7" x 4" x 1".
- ★ RELIABLE The Mega Drive uses the most reliable TEAC mechanism, and assures you of trouble free operation. Full 12 months RTB guarantee.

G.V.L. Microform (Dept CPC7)
191, Watling Street Road, Fulwood, Preston, PR2 4AE
Phone: 0772-701248 Fax: 0772-703131

FDI Disc Drive.......£79.95

Overseas Orders Welcome

MS800 - the STANDARD in 800K storage....................£9.95

MS800 enables the Dual-Mode disk drive to store up to 800K per disk. Since it was introduced last year it has become the best selling software of its kind by far. So much so that many people have converted their earlier 3.5" and 5.25" drives to dual-mode capability and switched to MS800. As one user put it "...MS800...knocks spots off Rodos" and we have had similar comments concerning the other alternatives.

FEATURES INCLUDE:

360K, 400K or 2 x 180K per side; compatible with CPCs, PLUSes CP/M+, MFII, Stop Press, etc.; 64 or 128 directory entries; verify disk; disk copy; file and batch copy; unlike all alternatives each disk initialises the computer for its own format without using up any of the storage space! Once a disk has been formatted, MS800 itself is not needed.

Formatting up to 400K on each side needs a SIDE SWITCH on the drive. Our drives already have one fitted, but for £3 we can supply a kit and instructions - suitable for 80 track, double sided 3.5" or 5.25" disk drives.

Side Switch with instructions £3.00

SPECIAL OFFER

40 X 3.5" Discs & Disc Box

!!! £29.95 !!!

MP3 TV Tuner.....................£29.95

CT1 Clock/Radio.................£14.95

MP3 & CTI..........................£39.95

MAXIDOS (with FREE PROCOPY) - £13.95

THE MOST COMPREHENSIVE & EFFECTIVE GENERAL DISC UTILITY PACK FOR THE CPC

MAXIDOS is Fully compatible with RAMDOS, ROMDOS, AMSDOS and CPM formats! COPY files/disks; VERIFY disks; RESURRECT erased files; FAST FORMAT Amsdos/Ramdos/Romdos; IDENTIFY format; CAT files (inc. erased ones) optional status/address/length/etc; alter USER AREAS, make/unmake system or read only, DISPLAY or PRINT files...AND MUCH MORE! BEST SECTOR EDITOR EVER for the CPC. All standard editing facilities PLUS FILE MAPPING to screen or printer, auto step by step movement through a file, string and byte SEARCH through file/disk. FILE ARCHIVER backs up disks to tape: variable baud rates. SPEED UP YOUR DISKS! unique OPTIMISE re-arranges your crowded disks making them load up to 50% faster.

Trade Enquiries Welcome

BONZO SUPER MEDDLER...........................£13.95

now includes the BONZO HACKPACK - FREE! The most comprehensive tape to disc utility. Supplied on disk with a huge database of verified transfers. Produces stand-alone transfers.

BONZO BLITZ...£13.95

now includes the BONZO DOODAH *and* 4 adventure games - *free!* Tape to disk transfers. Deals with all forms of Speedlock. Works on all CPCs. Huge database of verified transfers.

BONZO BIGBATCH...£9.95

Fast, flexible DATABASE, superb FOOTBALL POOLS PREDICTOR plus a user-friendly, memory saving SCREEN & SPRITE DESIGNER.

BONZO FLASHBACK £9.95

"The best all round BASIC extension program" WACCI. FLASH BASIC adds about 70 extremely useful RSXs to use in your BASIC programs but the resulting programs will run on any computer without the presence of FLASH BASIC. Includes a database and other excellent example programs.

ABBA SWITCH (6128) £12.95

6128 ROM £24.95

(Including filing instructions)

FILE TRANSFERS

CPC To/from PC's, PCW's and Others

2in1 ....£24.95 MFU £29.95

(Both programs run in CPM+ NOT CPM 2.2)

464/464+ OWNERS

Want a DISC DRIVE? Cannot find a DD1-1?

Exchange your 464 for 6128..............................£129.95

Exchange your 464+ for 6128+............................£99.95

It's cheaper than buying a DD1-1, Rampack, & ROM

OTHER ITEMS

3.5" Discs (Mitsubishi Branded)	(10)	£7.95
3" CF2 Discs (Amsoft)	(10)	£19.95
3" CF2 Bulk	(10)	£15.95
Plastic cases for 3" CF2 discs	(10)	£5.95
3.5" Disc Box (Holds 40)		£7.95
Printer Lead		£7.95
64K DKtronics RAM PACK		£39.95
6128 ROM (with fitting instructions)		£24.95
6128+/464+ Adapter		£9.95
Disc head cleaner 3"/3.5"		£4.95



Phone your order before 3.00pm for same day despatch

All prices include VAT, postage & insurance for UK & BFPO. Overseas orders charged at the cost of airmail postage. Trade enquiries welcome.

CREDIT CARD ORDERS (24 hr Service)

Phone 0772-701248

WIN! WIN! WIN! WIN! WIN! WIN! WIN! WIN!

COMPE

ENTRY FORM

Answer the questions and send to the address below:

1 Which company is the biggest 3rd party console games producer (i.e. apart from Nintendo or Sega)?

....

2 Which game is supplied free with the Super NES?

....

3 Name any four games which are currently on release.

....

....

Name..

Address...

....

....

....

Tel No..

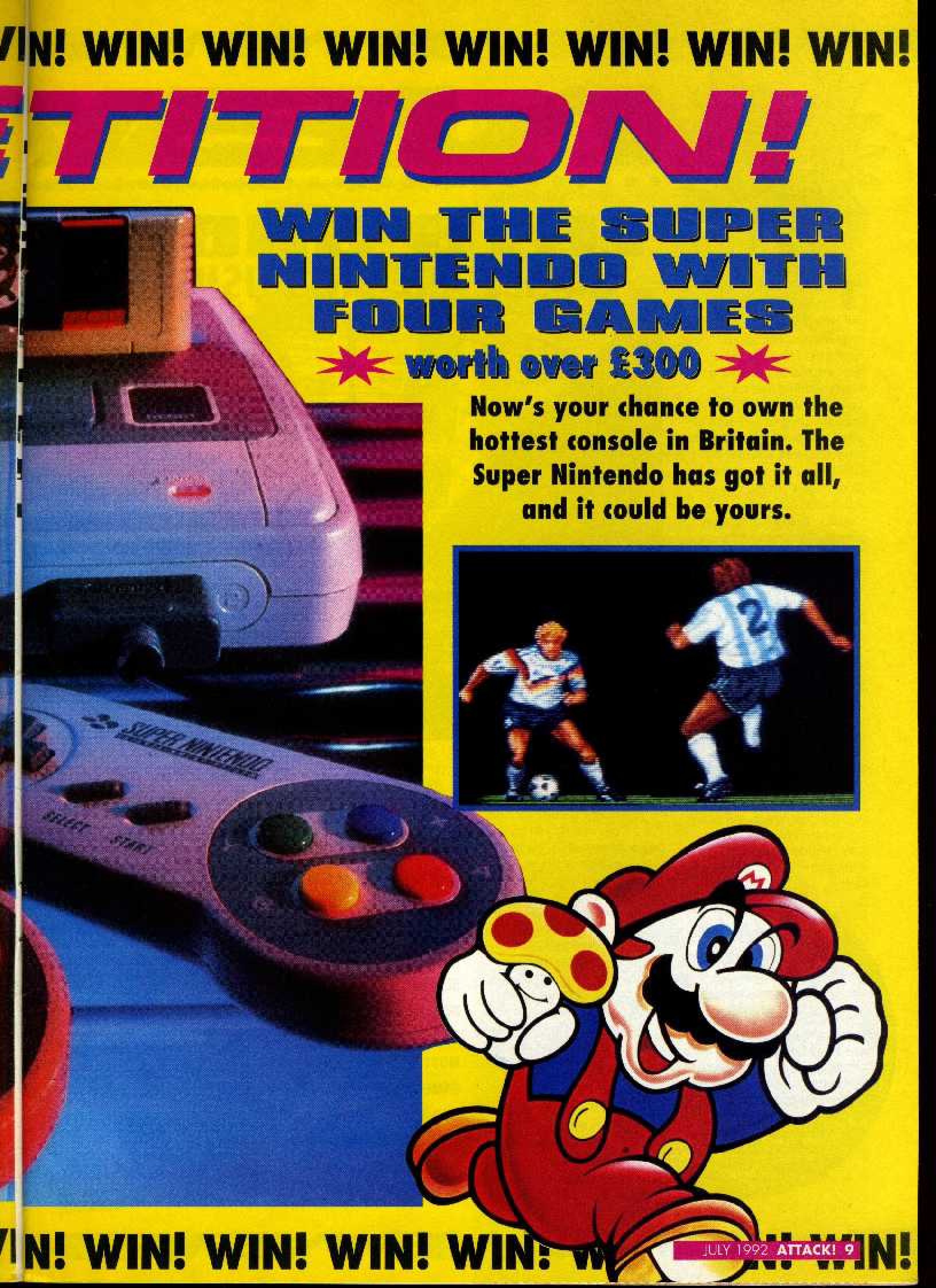
Send your entry to:
JULY COMPETITION, CPC ATTACK!, HHL Publishing,
Greater London House, Hampstead Road, London NW1 7QQ
or FAX: 071-387 9518
no later than 1st August 1992.

RULES

The judge's decision is final. The prize winners will be drawn from all entries whether correct or incorrect 4 weeks after the publication date. Only correct entries can win. In the event of an incorrect entry being drawn further entries will be drawn until a correct entry is found. It is not wise to submit other correspondence with competition entries (and vice-versa) as your envelope may not be opened at all. In the event of sponsors defaulting on prizes, replacement prizes of a similar value will be given. No cash alternatives may be offered. No written or verbal communication will be entered into, other than at the judge's discretion. Big, pink, long, and perfumed envelopes will be confiscated. Multiple entries are not allowed unless separate on genuine forms - no photocopies(*or multiples only). The addresses of culprits found to be breaking any of the above rules will be compiled into a blacklist and sent to Readers Digest. They may also be punished with a free subscription to Amstrad Action.



WIN! WIN! WIN! WIN! WIN! WIN! WIN! WIN!


N! WIN! WIN! WIN! WIN! WIN! WIN! WIN!
TITION!
WIN THE SUPER NINTENDO WITH FOUR GAMES
worth over £300
Now's your chance to own the hottest console in Britain. The Super Nintendo has got it all, and it could be yours.
SUPER NINTENDO
SELECT
START
N! WIN! WIN! WIN! WIN!
N! WIN!

KNOW SOMETHING WE DON'T? PHONE 071-388 3171 and ask for the ATTACK! HOTLINE

NEWS

ECTS SHOW
GAMES ARE BIG BUSINESS



The ECTS show is a trade show where all the industry big wigs usually get together and talk about business. This year the show was a massive success and finally clarified that the console and PC leisure markets are growing, with all other computer formats taking a bashing - it's not only the CPC! For a few years the Commodore Amiga has dominated the games industry, both in talk and in awards. Not so this year, the Amiga, big as it is, has taken a back seat, but has held up well in the productivity arena.

Consoles are the toys of the nineties, just as computers were the toys of the eighties. They are so accessable that TV companies are scurrying to get their own TV Computer Games Show on the air after the success of GamesMaster (which is crap and how they get away with it is beyond belief!)

The full awards show that PC and console games rule, and that the Amiga and other computers are dying breeds. This clarifies what is being seen and said - console arcade games beat the super computer, the Amiga, hands down, while huge strategy games such as Wing Commander just can't be implemented on the lesser machine. It seems that Britain's best supported games system, the Amiga, is a half-way house between two standards!

Big news, although not a shock, was that Commodore didn't pick up the coveted Hardware Manufacturer Of The Year Award. This award highlights the hardware that the industry will be backing - it went to SEGA!

GAMES NEWS

The Hit Squad will be releasing Cyberball, Klax, Nightbreed (arcade) and Sly Spy very soon.

Kixx has got a large selection of goodies coming to a screen near you. Some of the more imminent titles are Microprose Soccer; Gunship; Myth; World Class Soccer; Super Monaco GP; Silent Service; Crackdown; Shadow Dancer; Solo Flight; Flimbo's Quest; SWIV; F15 Strike Eagle; Acrojet; Strider 2; and Heavy Metal. These are not in any particular order.

ECTS AWARDS

BEST CD GAME	Sim City (PC)
BEST PACKAGING	3D Construction Kit
BEST HOME PRODUCTIVITY PACKAGE	AMOS 3D
BEST ART PACKAGE	DeluxePaint IV
BEST SOUND	Wing Commander II (PC)
BEST GRAPHICS	Wing Commander II (PC)
BEST ACTION GAME	Lotus Turbo Challenge II
BEST ADVENTURE/RPG	Eye Of The Beholder
BEST SIMULATION	Railroad Tycoon
BEST SPORTS GAME	Jimmy White's Whirlwind Snooker
MOST ORIGINAL GAME	Civilisation
GAME OF THE YEAR	Lemmings
GOING LIVE! VIEWERS AWARD	Sonic The Hedgehog (Sega)
BEST VIDEO GAME	Sonic The Hedgehog (Sega)
SOFTWARE PUBLISHER OF THE YEAR	Microprose
HARDWARE MANUFACTURER OF THE YEAR	Sega

NEWS

ABCs ARE GOOD BUT ONLY WHEN IT SUITS US!



Many magazine readers don't really care about which publisher "makes" the magazine they are reading, but listen to this bit of industry gossip that's shocked the magazine trade. ABCs are an audited way of telling the trade how many copies of an individual magazine are being sold. They are, on the whole, very unreliable, but give a fair indication of copy sales and are needed by some magazines to convince advertisers to advertise - ATTACK has no such problems. We sell well, we know it, and advertisers know it! Anyway, it has been brought to the trade's attention that copy sales can be rigged to give a higher ABC than is really being achieved. Many magazines using the system are so caught up in it all that they're not making as much money as they should be, so to make up the loss incurred by sales promotions they put the extra costs onto magazine cover prices making magazines more expensive! That's why we don't use the corrupt and pathetically administered ABC system. However, Future Publishing, makers of Amstrad Action nearly always use the ABC system - they seem to need them (have you seen the amount of ads in Amstrad Action? - pretty poor despite their ABC.) I say 'nearly always' because apparently they only use them when it suits. Take the case of their Amiga games title - Amiga Power. They claimed for over a year that it was the best-selling Amiga games magazine - they got away with it because the other magazines didn't have ABCs. The other magazines then got their ABC, and lo and behold one title, Amiga Action had a higher ABC than that of Amiga Power. But not to be undone, Future Publishing stopped publishing their lower ABC, whilst still promoting their title as the No.1 seller. Their reasoning was that the ABCs were six months out of date (they actually are) and that their title was now selling more than the 'official' ABC. They refuse to concede that Amiga Action could be selling more. A bit misleading and dishonest, methinks!

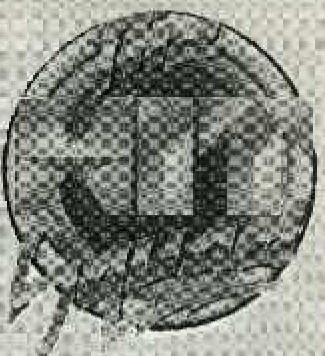
AMSTRAD ACTION WRONG AGAIN



If you read the said rag, you'll have noticed that they ran a story about seeing off ACU - huh! Just a quick note to say that ACU was an official Amstrad title which was leased, on contract, to the magazine's publishers - US. The contract expired and because of Amstrad's discontinuation of support for the CPC, it was mutually decided that it would not be renewed. It left a dilemma as there were loads of readers out there without a magazine. CPC ATTACK! is a replacement magazine to fulfill the requirements of previous ACU readers and advertisers.

SNIPPETS

HIT SQUAD TO RELEASE FUN SCHOOL



HIT NAMES...HIT GAMES is the motto of THE HIT SQUAD, but as of September the budget label will be releasing Fun School 2 at £3.99. Apparently, The Hit Squad beat off a number of contenders for the rights to the educational title which will be a marked departure from its games-only stand. Will there be more non-games titles, or will other budget labels take up on The Hit Squad's initiative? Watch this space!

STAR NO 1 PRINTER MANUFACTURER/SELLER

After years of growing and growing, Star have officially been confirmed as the Number 1 UK printer manufacturer, ahead of such previous giants Hewlett Packard, Epson, and Citizen, and Oki. The manufacturer has been the main player in the printer market for years, constantly releasing higher specification printers at lower prices - they were the first to introduce affordable colour impact printers to the UK. Star's aggressive assault on the market has earned it the title of the people's favourite and they get the ATTACK! vote of approval - every Star printer ever released has been the best in its market. Shucks, we even have two Star's at ATTACK! - the LC24-200 and the Star Laserscript 4 (not on the CPC).

STARDUMP FROM GOLDMARK

Goldmark Systems have released Stardump for the CPC. The program is a mono 24-pin printer graphics package which outputs CPC graphics to print. Goldmark are also working on 14-pin Colour StarDump. Watch out for a full review of mono-StarDump next month! Contact: Goldmark Systems, 0707 271529.

PRAISE BE TO THE LORD!

Sing and be happy, for the Lord cometh! Evangelsoft are releasing new computer software for bible teaching. The Good News (excuse the pun!) is that of their five new titles, only one is available on the CPC. Evangelsoft is the programming and marketing company for EvangelTrust, a registered charity committed to the spreading of the Word through computer games. Praise Be! Contact: Evangelsoft, 081-949 2733.

Welcome to the letters pages. It's all here...all the gossip...all the views..all the comments...it's the biz



Gotta letter? Then get it in:

LETTERS, CPC ATTACK, HHL Publishing, Floor 3, Greater London House, Hampstead Road, LONDON NW1 7QQ

or fax: 071-387 9518

HI.

I've been a long time reader of Amstrad Action and that's where I first heard of ATTACK! I bought the first issue and now it's goodbye old mag, hello to the newest, brightest, biggest, and best CPC magazine I've ever read!

How can anyone say that the CPC is dead when there's a magazine that's this good? See you next month.

J. Sparry, Sidcup.

Since you wrote the letter last month, do you mean next month or this month? That's always puzzled me! Anyway, as you can see, praise isn't short on the ground today (or was that yesterday?), but it's going to get better. Just as this issue is an improvement on the last, next month is going to be better still!

We've got the best writers in the CPC scene, we've got the best designers, and we've got the best editor and back-room boys! We're really wonderful and everyone has being telling us so. We've recently moved into spacious offices so that we can fit our ever-expanding heads.

You Wot?

I don't think that the Top 50 Games in the first issue of ATTACK! was totally fair and correct. There's lots of games that I've heard of that are better than some of those you have listed. For instance, Rick Dangerous was given a high score, but the sequel, Rick Dangerous II, isn't to be seen anywhere - surely it's a good game even if it mightn't be superior. Also, what of Turtles II, Blues Brothers, Swap, Puzznic and there's loads more that I'd have thought to be better. Your scoring system was also a little naff - surely of all the games that have been released for the CPC, a top 50 breakoff point of 86% can't be right? Are there only 50 games worthy of a score of above 85%?

James Chandler, Manchester.

Ah! I knew that we were going to get letters on the Top 50. I just knew it! Charts like these are always controversial because of various likes and dislikes. Yes, there are games which have been missed out. They simply weren't available, or they weren't good enough. Games which may have scored 100% when first reviewed several years ago, just weren't good enough. Because we could take a fresh, unbiased look at all the games, we were able to compare them on merit - against each other, and although games may be rated similarly, the chart is a guide to what is best. We were desperate to get our hands on games such as Super Monaco GP, Rick Dangerous 2, Blues Bros, Final Fight and lots more too, but they simply weren't available, either from the software houses or shops. It would have been a shame to put them in, if you couldn't go out and buy them, so we wait for the games to be re-released or released on budget label. Then we will give them full reviews and slot them in to our Top 50, but only if

Flippin'eck, guv

I bought a CPC6128 PLUS a few weeks ago. The package included the instructions, which seemed to be more of a reference guide for the uninitiated, rather than a progressive course of instruction for the novice. I wondered if there were any books relating specifically for the PLUS.

I wrote to Amstrad and they recommended a new publication 'CP/M Plus on the Amstrad PCW'. I ordered this by mail, and duly received it. Unfortunately, it appears to be dedicated solely to the Amstrad PCW. For the most part, utilities mentioned are not present on the CPC PLUS system disc. Furthermore, some of the operations call for the use of auxiliary keys, which the CPC doesn't possess. It looks as though I'm some £13 down, unless I can at least get half back by selling the book!

S. Braithwaite, Lincoln.

Can't help you on the PLUS front, but there is a book on CP/M - CP/M PLUS HANDBOOK for the CPC6128 and PCW8256, ISBN 0-434-90321-3. I don't know how good it is though, maybe some reader can help out on both areas.



Geeez

Can you clear up a small point? I read in Amstrad Action that ACU was being closed and that your magazine was starting up. I also heard that ATTACK! was replacing ACU, and also that ACU was being relaunched as ATTACK! What's happening and will ACU be back?

Keith Strong, Ipswich.

Well, as you may have known, ACU was an official Amstrad title, licensed to the magazine's publishers. When HHL Publishing was born, it decided to cancel the Amstrad contract. As such, it had to lose the title, but since ACU was doing well it was decided to launch a new unofficial magazine to fill the gap left by closing down ACU. From what has been fed back, we've succeeded in not only doing that, but have also picked up lots of new readers.



Hey

What a great issue number 1 was. I've had a CPC for a couple of years now and although good mags have come and gone, I've never seen anything as good as ATTACK! The content was a bit gamesy, but the Top 50 was wicked. I am looking forward to what's still to come and search every week for its reappearance just in case I miss it. The Q&A section is a godsend to people like myself, and I feel that just by reading other readers' problems that I am learning more about the CPC. 100%

Joe Baker, Bath.

Shucks, I've gone all weak at the knees. What a lovely kid we have here. All praise and no take. To help shelf searchers, we have a next month page in every issue which tells you what day the magazine appears, but if you didn't get the last issue you wouldn't know when to get the next - would you? Again, help is at hand - fill in the coupon below and give it to your newsagent, they'll order you a copy of ATTACK! every month - 9/10 newsagents prefer this system.



I knew it!

I did, I did, I did. I knew that sooner or later we would get bombarded with console articles, and messages of how we all should move onto consoles. Are you trying to preach, convert or what? If everyone reading ATTACK! went out and bought a console then there wouldn't be any readers and there wouldn't be an active CPC scene. Please explain this ridicule.

Bob Gladstone, Chiswick.

Console Crazy was a superb article, enlightening readers to what is available. Sure, many readers don't care for that sort of thing or you'd be reading crap console mags (I've yet to see a good one). We ran the feature because consoles are a topical and interesting subject at this moment in time. To think that the whole games industry started over 10 years ago with game consoles, and now we've turned full circle, through the computer stage and back to the plug-in cartridge and paddle. It's much more sophisticated nowadays, isn't it?



Howzatt!

When I recently set out to get my children a computer, my mind was set on getting a CPC because of friends, recommendations. On 'phoning round some of my local stockists, it became apparent that they had stopped stocking the 6128. So, thinking that the 6128 PLUS would be a better buy, I purchased one.

Since then, I have found that I can only buy games through mail order which makes it difficult for my children to know what they want. I have also found it disconcerting to read that there is an apparent shortage of 3in. discs and that some software houses are thinking of dropping the CPC games from their stocks.

In general, I am very pleased with the computer and the games I have, but I must admit I'm starting to think I may have bought a WHITE ELEPHANT in my 6128+.

P. J. Morley, Coventry

Can't help thinking that the full-price softcos' have pulled out for good, but there's plenty of good games around - probably more than you'll ever need. The problem will be getting hold of them - I'd advise that if you want to keep the CPC for a while an external Tape Drive may be a good investment. There are plenty of good budget games being released on cassette.

Oi!

What's all this multiface business - what is it and how can I get one? Also, can you tell me if the Dizzy games can be bought on disc for a CPC6128 PLUS? Oh, and where can I get back issues?

Kevin Brady, Ireland.

A multiface is a device which plugs into the back of the CPC. With it you can stop games, enter pokes to make games easier, and save out useful information. Contact Romantic Robot on 081-200 8870.

As far as I know, Dizzy games are only released on tape, but if you call Codemasters on 0926 814132 they'll be able to help.

Finally, back issues can be ordered from the Subscription department - see CONTACT on the contents pages.

NEWSAGENT ORDER FORM

Dear Newsagent,

Keep me a copy of CPC ATTACK! every month, and don't let that Jones boy down the road get it!

Name:..

Address:..

....

* Newsagent: You can get CPC ATTACK! from you local wholesaler

```
Amstrad 128K Microcomputer  (v3)
©1985 Amstrad Consumer Electronics plc
         and Locomotive Software Ltd.
PROTEXT word processor ©1985 Arnor Ltd.
PROSPELL spelling checker ©1986 Arnor
ROMDOS (C) KDS 1988.
BrunWord (C) Brunning Software 1991.
BASIC 1.1
Ready
```

TEST RUN

WORD'S OUT

Brunword and Protext are the only two CPC word processors that offer a serious alternative to those on the PC. We hacked them to pieces to find out which is better...

The first serious application most computer owners buy is usually a word processor. Six or seven years ago the CPC had a multitude of choices, but time plus the consistent quality of Protext and the astonishing development of Brunword, has seen most of them off. Some of the others are probably still around, but in truth the choice has narrowed to two.

Protext and Brunword are truly professional word processors, capable of work rivalling anything to be found on a PC - for a fraction of the cost! To choose between them is extremely difficult and will depend on what is required from the software. If the only requirement is occasional letter writing, almost any WP will do the job. But other more professional tasks such as producing leaflets, newsletters, adverts and even fanzines require a degree of sophistication that is beyond the more basic WPs, but well within the scope of the two applications under test here.

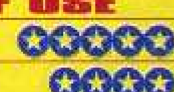
Is speed, or simplicity a vital factor, or is cost more important? Do you require extra-high quality output and if so how do you get it? Mail merge is a powerful feature, but do you need it? And is a database included in the basic package?

Printer driving is of paramount importance when deciding which WP is the right one. For example, you might already own a daisy wheel typewriter with a built-in computer interface, or even the old Brother EP44, and want to know which WP will drive it. Solve that problem and you could save up to £200, and a letter from your bank manager!



Brunword

EASE OF USE

PROTEXT	
BRUNWORD	★★★★

It has to be said that speed is Protext's forte, though Brunword isn't far behind. Moving 25k of text around on Protext is nippy. The cursor can jump, not only from character to character, but with just two key presses can go from word to word; paragraph to paragraph; screen to screen; page to page; or from one end of the text to the other - instantly! It also has a command to find the last cursor position. Other goodies include the ability to delete from the cursor to the end of line with (the statutory) two key presses; delete a word at a time, and a line at a time.

Cursor movement on Brunword is just as fast, but not as comprehensive. Identical attributes and assessment also apply to the very similar delete features. Key response of both programs is lightning-fast and even the swiftest touch-typist should have no complaint with either.

Obviously, both WP's ROMs allow the maximum of memory for text, but even the disc and tape versions leave enough space for at least half a dozen pages of A4. If a document takes up more memory than available, both programs have simple systems to save the document as separate files which are reloaded automatically.

DOCUMENT HANDLING

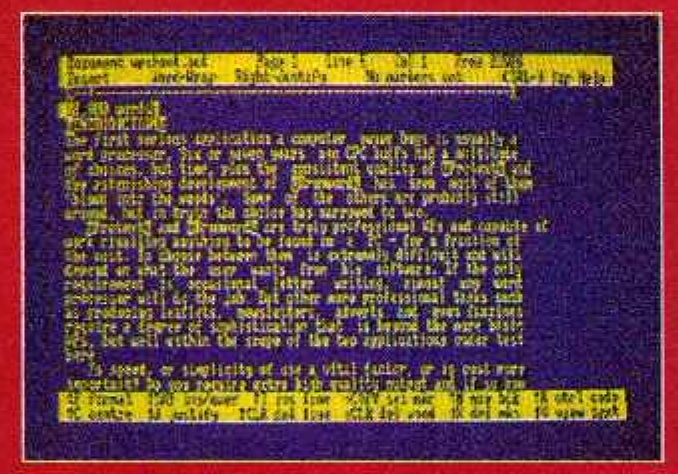
PROTEXT	
BRUNWORD	★★★★

Creating templates is simple and comprehensive on Protext, which like Brunword, supports all Epson escape codes. It has scores of special commands, which are mnemonic, to simplify layouts. The Header and Footer system is superbly flexible, versatile and easy to use. You can switch them ON, or OFF at will, and may even specify odd or even pages.

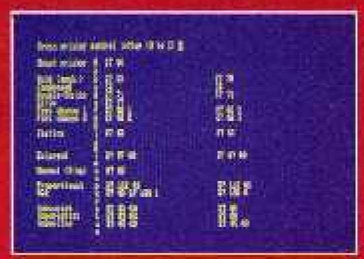
Justification of mono-spaced text is neat and even, but the program has problems with proportional text. It can be achieved, but not many users know the secret! Reformatting must be done manually, either a paragraph at a time, or in total.

Brunword is also easy when it comes to creating templates, and its definitions take up less space than those on Protext. There is a tremendous number of special commands enabling very complex page layouts. The Header and Footer system is pretty basic and not in the Protext class, but is much improved on Brunword's ROM version. Justification is powerful, sophisticated and easy to use and handles proportional printing with ease. Text is reformatted automatically.

PROTEXT



Typical screen layout



Prospell checks after sorting



Defining keys to create printer drive

BRUNWORD



Brunword checks words displaying options with choices

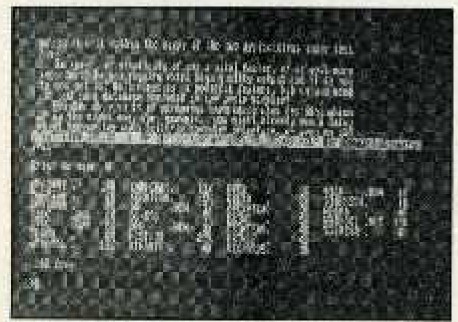


Brunword's commands

TEXT HANDLING

PROTEXT ★★★★
BRUNWORD ★★★★★

Moving large chunks of text around presents few problems to either program as the Cut & Paste editing is easy to use on both. Protext's method requires the defining of a block using a marker system and the necessary MOVE operation is executed with two key presses. The markers have then to be cleared before redefining them for the next move.



Protext ESC> mode



Brunword uses an application key to toggle the text from normal and inverse video and at the cursor position. The move is completed with a two-key press, thus moving the highlighted text. A further keypress clears the inverse video.

The method used by Brunword is marginally better because of its convenient text merging system. Other files, or text blocks, can be held in memory and easily incorporated into the working document at the cursor position. ESC-W performs the oracle!

Two-file editing is possible with both programs, Brunword being similar to the above Cut & Paste operation. Protext must call a file from disc, and although fairly simple, is slightly less convenient.

Brunword features automatic word-counting via a continuously updated total within the print menu. Protext must be given a COUNT command which, although less convenient, also counts the words within a defined block!

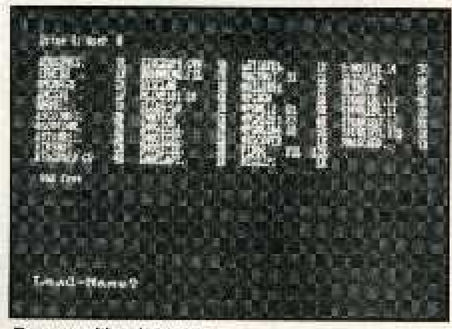


In all but the CP/M version of Protext, the spell checker, Prospell, is a separate program and costs extra. However, it can be used as a stand-alone program which will perform a couple of party tricks such as finding word patterns and solving anagrams!

All versions of Brunword include Brunspell as part of the complete WP package. The dictionaries of both are approximately the same size, which is around the 30,000 word mark.

The main difference between the two systems is that Brunspell and its dictionary are held in memory and Prospell isn't! This gives Brunspell a significant advantage in that any word can be instantly checked and corrected.

Prospell can be called up at any time, but must go through a sorting process before it starts checking. The processing time is largely offset by speedy and intelligent checking. Although it might appear to be slower than Brunspell, there are certain procedures that slow Brunspell down.



Brunword load screen

Prospell has no problem with plurals and doesn't process numericals, whereas Brunspell checks numericals and command sequences - even those in its template and layout! It also queries hyphenated words and considers plurals as separate words.

On a long, complex document and layout there is very little to choose between the two programs, either in speed or intelligence. Brunspell is slightly more convenient because of its 'instant' look-up facility.

PRINTER CONTROL

PROTEXT ★★★★★
BRUNWORD ★★★★

Protext has a marvellous system called Setprint which allows the user to configure the program to drive just about any printer available to man, or beast! Custom features such as defining control codes and embedded commands, and redefining keys turns the whole program into a personalised and dedicated WP. All work within Setprint can be saved as a printer driver and then incorporated into a template for future automatic loading and use.

Brunword does not require the user to bother with such mundane things as printer drivers. Epson LQ compatibility is built-in and completely foolproof. As long as you can buy an Epson compatible printer of either 9 or 24 pin, you can forget about setting up a program to drive it - Brunword will!

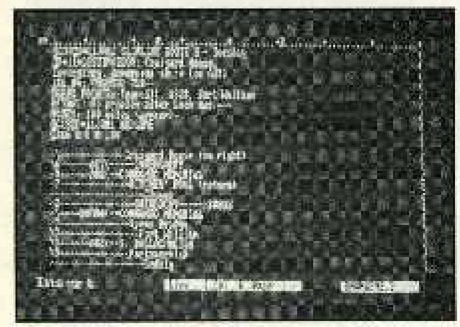
Printer control is the most diverse feature of all and sets the two WPs apart more than any other. As most people will buy an Epson compatible dot matrix, Brunword presents a hassle-free system which amounts to 'plug it in and forget about it!' However, if you want to drive a laser printer or a daisy wheel you can forget it - you won't be able to! If you have uncertain printer requirements or own one of the non-Epson compatible machines, the Protext will solve your problem, although it does initially require a degree of setting up.

There is a final difference between the two programs when printing full justified text -

which Protext erroneously calls 'right justify'. Brunword makes use of the printer's built-in justification routine and consequently is unable to full justify, or right justify text when driving one of the new Epson ESC P2 machines, such as the LQ-570 or LQ-100. However, with all other dot matrix printers it performs faultlessly. Protext uses its own routines for justification and has no such problems.

DOCUMENTATION
PROTEXT ★★★
BRUNWORD ★★★★

The manuals of both WPs are good, well laid out and complimentary to the all-round quality of the software. However, they both share a common fault which is the assumption that the user is computer-literate.



Typical Brunword layout screen

Protext's manual is the worst offender, compounding the problem by neglecting to go into detail, or give examples to clarify a procedure. For example, saving an ASCII file is not explained in any way, the manual just happens to mention it in passing! The CP/M version's manual goes into great detail of how it is accomplished, but the procedure is different to that of the AMSDOS versions.

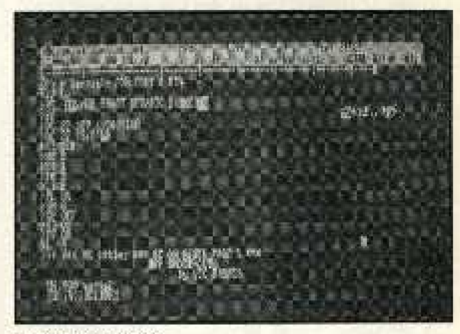
The Protext manual fails to clarify some of the correct procedures and sometimes it is almost impossible to get a clearly legitimate command to work. On the positive side, there are tables of all Protext's commands and ESCape codes in an excellent index at the back section of the manual.

Brunword's manual is much more user-friendly and written with great economy and maximum clarity. Occasionally, it assumes that the reader is not a novice, but any confusion can be cleared by referring to one of the many example files supplied with the package. These have the advantage of guiding the novice through some of the most complex layouts and also allow the stripping of text so that all commands can be saved as a template.

EXTRAS
PROTEXT ★★★
BRUNWORD ★★★★★

Brunword Elite is a terrific value package, especially in its ROM version. This gives you, not only a word processor, but also includes Info-script (a superb relational database), Brunspell (spell checker), Headline (ten 9-pin fonts and print enhancement program which print as larger typefaces for 24-pin machines), a selection of eight 24-pin ultra letter quality fonts, and a disc formatter. In addition, there are other goodies built into the WP which allow you to perform miracles such as true right justification, mail merge, draw boxes and vertical lines, print any number of columns anywhere on the page, scan-in and download picture files, and use a second 3.5in. disc drive if ROMDOS (£15) is present. And if that isn't enough, all Elite purchasers get a FREE printer lead, with a built-in 8-bit status port!

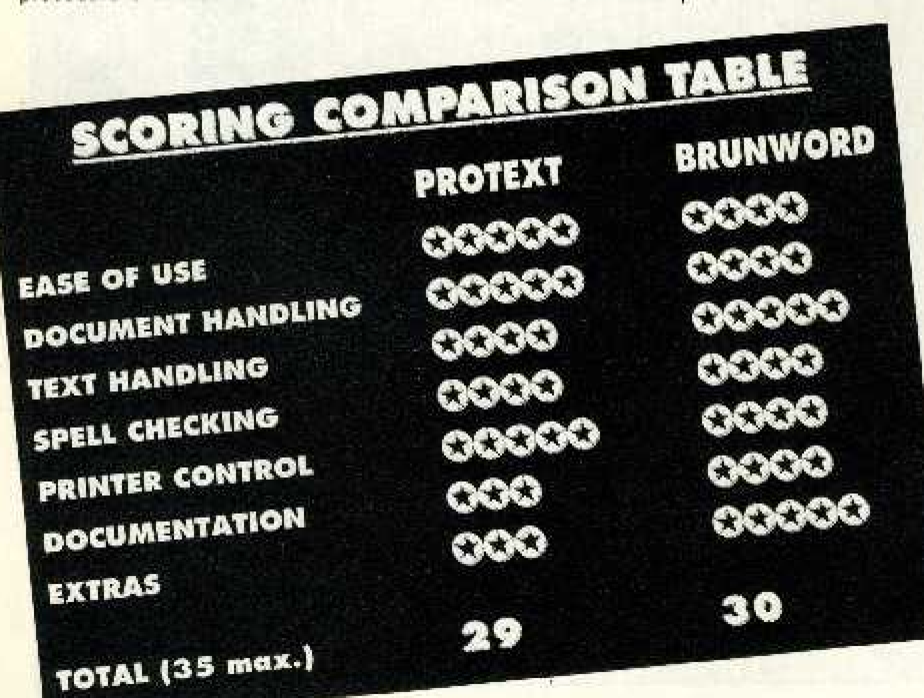
The disc version doesn't include Headline, second disc drive support, or the picture downloading routines, but in all other respects has similar extras.



Protext template

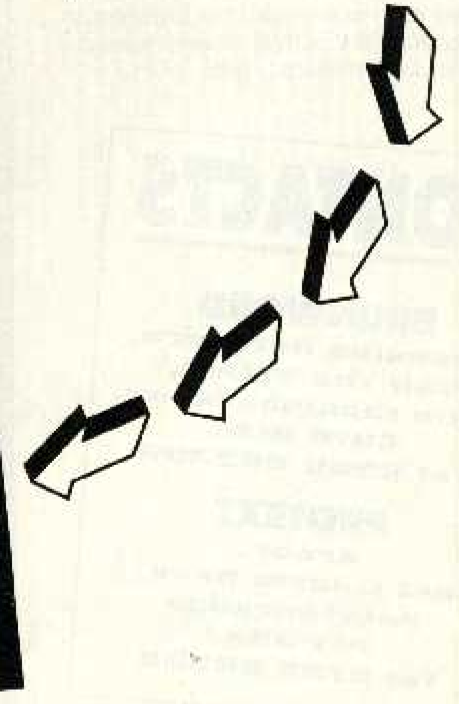
CP/M Protext is supplied on disc only and is Arnor's all-singing, all-dancing version and includes Prospell (spell checker) and Promerge (mail merge and WP enhancer). It will also format and copy discs, and provision is made for the use of a second disc drive. It is, perhaps, the most sophisticated of Arnor's programs and is the nearest thing, on a CPC, to PC software. A 'startup' disc must first be configured (a bit of a pain), but once done becomes the system disc. It contains everything you need in a WP other than a database, which means that unless you own Masterfile or a compatible program, you can't use all of its considerable power. The biggest drawback is the amount of memory used, but a large volume of text is handled by loading and saving parts automatically.

If you decide to buy the ROM version, all you'll get is the basic Protext WP chip. You'll have to purchase (or own) a ROMBOX and the required extensions, such as Prospell. The big advantage of this is that a system can be built to suit monetary and memory requirements.



SCORING COMPARISON TABLE

	PROTEXT	BRUNWORD
EASE OF USE	★★★★★	★★★★
DOCUMENT HANDLING	★★★★★	★★★★
TEXT HANDLING	★★★★	★★★★★
SPELL CHECKING	★★★★	★★★★
PRINTER CONTROL	★★★★★	★★★★
DOCUMENTATION	★★★	★★★★
EXTRAS	★★★	★★★★★
TOTAL (35 max.)	29	30



VERDICT

Both WPs achieve the same end result by printing text on the printed page, but arrive there by different routes. There are also a number of diversions along the way and it's these little detours that will determine which one is better for your needs.

If your priority is high-speed text handling, letter and copy writing and want nothing more than continuous, good quality printouts on a few sheets of A4, then Protext is supreme and a positive delight to use. Its layout abilities are limited though, but can produce neat, two-column text courtesy of an easy-to-use Box Mode. It will do more than that - and very well too, thank you!

On the other hand, Brunword Elite excels when asked to produce complex layouts and high quality output. This is due to the large number of carefully worked-out printhead positioning commands and clever exploitation of modern, dot matrix printer technology. The included fonts are of stunning quality and can stand comparison with anything an inkjet printer can produce, giving users the added advantage of more choice and versatility.

Info-script, Brunword's integral database, enables simple (or complex) mail merging and automatic labelling. With Protext the power to do the same is also available, but lies dormant because no database is included.

There is little to choose between the two programs, but I can imagine country vicars, club secretaries, fanzine editors and corner shop owners buying Brunword to exploit its versatility and the multitude of diverse features. Protext's most obvious devotees will be prolific authors, hard writing 'hacks' and school teachers.

Protext is easy to get into and can be instantly exploited. Brunword requires more time, but can achieve more. As good as the former is, it has to be said that Brunword, in all its forms, is incredible value for money. Perhaps you should buy both!

FEATURES COMPARISON TABLE

	BRUNWORD 6128	BRUNWORD ELITE	BRUNWORD 24-PIN	PROTEXT DISC/TAPE	PROTEXT ROM	PROTEXT CP/M
PRICE	£30	£90	£125	£29.38/£19.95	£39.95	£49.95
SPELL CHECK	★	★	★			★
DISC FORMAT		★	★			★
MAILMERGE	★	★	★		★	★
DATABASE	★	★	★			
MULTI-PRINTER				★		★
EXTRA FONTS		★	★			
PRINT BOXES		★	★			
LAYOUTS		★	★			★

PROSPELL - £24.95(disc), £34.95(ROM) PROMERGE - £24.95(disc) PROMERGE+ - £34.95(ROM)

CONTACTS

BRUNWORD
Brunning Software,
138 The Street,
Little Clacton, Essex.
CO16 9LS.
Tel:0255 862308

PROTEXT
Arnor,
611 Lincoln Road,
Peterborough
PE1 3HA.
Tel:0733 68909

CONSOLE CRAZY

introducing the SUPER NINTENDO

After a severe and long wait, the SNES eventually arrived in the UK at Easter. The sales are already reported to be high, with 3 of the 4 games currently available in the Gallup Top 20 All-Format Console Game Charts. After only a few months, the SNES is already lookin' good

The Super Nintendo (SNES) has been hyped as the best console around, and after only a few days play testing with the five games available for it, I'd find it hard to disagree.

The specifications of the SNES are attractive; it offers an amazing 256 colours on screen from a palette of 32,768. It may not seem spectacular, but it is, especially when you consider that these 256 colours are shifting around the 512x446 resolution screen at ultra-high speeds.

The SNES boasts CD quality sound, which pumps out beat after beat in stereo, and arcade quality graphics with rotation and scaling hardware controlled! Mighty impressive features. The SNES isn't just a computer without its keyboard (which is the analogy of its ilk), but is a fully fledged miniature arcade machine with all the necessary credentials, barring the slot! The quality of the graphics and sonics won't be matched by any other popular home machine - not an Amiga, and not a Sega, although the latter comes close.

Taking a closer look at the SNES shows that it is special; it can rotate and scale sprites without burdening the main processor, it can move several coloured backgrounds independent of each other, it can handle multitudes of various-sized sprites, and it's bitchin' fast! These qualities alone make the SNES a righteous machine, and when you put the marketing power of Nintendo and the best arcade programmers behind it, then you've got one heck of a good thing going.

The SNES is supplied with two game controllers, ample video/TV connections, and Super Mario World. Players who like to stretch out are well accommodated as all the



they don't take an age to load between levels, the games are usually bigger (more memory), and they can perform real random access to storage areas. Other considerations are that they are compact and can sit in a corner of a room, ready to go. In fact, consoles are everything a computer ain't!

The market for the SNES is also different to that of a computer. You can't word process, you can't play adventure games, you can't run your business, but it does play one hell of a game! It's not for computer folks, it's for games folks. The whole youth culture is being bombarded by labelling, brand names, and TV advertising on a massive scale and the SNES is taking its part in this.

Although there are only five games available (Super Mario World included), there's more to come, with industry giants such as Electronic Arts, Virgin, Acclaim, Konami, Ocean, Microprose and US Gold already preparing games for an Autumn appearance. There's also a neat plug-in conversion device around that allows American SNES imported titles to be played on the UK SNES. This opens up a new market for starved games players, although I don't think many will be happy with buying price-hyked imports, when the official releases will be the crop of this bunch.

leads are over 6 feet long!

Not content with a standard 8-way joypad with fire button, Nintendo have crammed in just about as many buttons as they could. Each of the 8 "hit" buttons are completely separate. The four colour buttons are used as main game controls, while the left and right buttons (ergonomically placed on the controller's side) are similar to function keys, performing tasks such as screen scrolling and object selecting. The start and select buttons are used in menus and pause/unpause the action. In the States, Nintendo have just officially released a super-controller which has an additional set of switches which are used to pre-select button functions, such as rapid auto fire, and can even put games into slo-mo!

The main advantage of consoles is that the games are supplied on cartridge, therefore they are instantly available upon power-up, so they can be reset as quick as you can say "friggin' nora!",



THE SUPER GAMES LINE UP

SUPER MARIO WORLD

Bundled free with the Super NES, Super Mario World, dubbed Mario 4, is Nintendo's main character. So would they produce a sub-standard game to accompany their top-of-the-range super console? No, they wouldn't! I know it, and you probably do too - Super Mario is an excellent game.

As can be seen from the graphics, Mario makes use of the colourful SNES abilities, although it doesn't go over-board. The game isn't that dissimilar from what you'd get on a CPC arcade platform, but obviously as you'd expect, the graphics, speed, and controls available on the SNES make all the difference in the world.

Mario 4 is set in Dinosaur Land where the troublesome Princess Toadstool has been kidnapped and has to be saved yet again! There's seven islands to Dinosaur Land, each with several locations which need exploring. Once locations are complete they uncover the path to the next, and thus don't need to be re-played. At the end of each island a boss has to be beaten in head-to-head combat to continue. Mario starts with 5 lives, but can gain lives by collecting "1UP" mushrooms and Yoshi coins.

Mario eliminates enemies by jumping on top of them (stomping) repeatedly, while, by hitting blocks from below, he can uncover hidden treasures, such as power ups and lives. Mario has four power states, Mario, Super Mario, Fire Mario, and Caped Mario. Caped Mario can fly, accessing the other parts that other Marios can't!

The two player option allows two players to take on the evil Bowser and his troops by playing alternately. If Luigi (Mario's brother) finishes a location, Mario doesn't need to, and vice versa. This opens up a challenge between players!



Super Mario World is an excellent game, in which the difficulty is set perfectly. Seasoned games players won't take too long mopping up, but will still find a challenge, while novices will be so addicted that they'll eventually plough through. The graphics are pristine and the sound is just brill! There's lots of different aspects to the game giving lots of variety, colour and gameplay. The save game feature allows the game to be saved after each island has been completed, but you only restart with the mandatory 5 lives. This is okay if you reach the stage with one life remaining, but annoying when you've got there with 12.





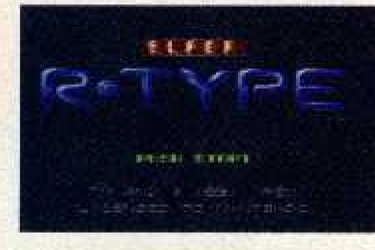


SUPER R-TYPE

NINTENDO - £39.99

Talk of arcade shoot'em-ups and R-Type is bound to come up - it's the Daddy of them all (Space Invaders being the Grandaddy). It just had to happen on the SNES, especially since it was, and still is, the game which others are compared to. On the Super Nintendo the graphics are the best there's been, the sonics are incredible and it's fast. Speed, graphics, and sound are what the 16-bit machine was built for and Super R-Type demonstrates these to great effect.

It's the standard shooter with lots of power ups, but the game shows the hardware's ability to independently handle four different sizes of sprites and multiple colourful playfields and not blink an eyelid!





SUPER SOCCER

NINTENDO - £39.99

Having been released in the States for only a month or so, Super Soccer was chosen to be one of the initial UK SNES games. The game features a superb viewing perspective, where all the action can be seen clearly.

You can choose any of the total sixteen teams in a tournament, practice match or shootout. The practice match allows you to play against a second player, or two players can play in the same team against the computer. Sadly, only the second option is available in the tournament. Two players can't play against each other. There's a reason for this; the tournament doesn't really exist. You pick a team, choose one or two players, pick your squad and formation, then you play against all the teams in succession starting from the lowest rank upwards. If you don't win, you don't proceed - it's more of a challenge than a tournament. That's where the game falls down. If there was a world cup tourney, where you played in a knockout or in a group, things would be a bit more exciting, but as it is it's just a challenge with nowhere to go, and no real goal other than to win.

Other than that, it's just a game of footy, but the game is well executed with fast arcade-quality graphics.











F-ZERO

NINTENDO - £39.99

Futuristic, Fantastic, Furious, Fanatical...what does the F stand for? We may never know, but F-Zero demonstrates the hardware's arcade graphics magnificently. It's a futuristic racing game, where the craft hovers above the circuits, traversing at many hundreds of miles an hour. Not only does the SNES capture the speed, but background displays have to be seen to be believed.

There's four racing crafts to choose between, each with its own set of attributes from acceleration to top-end speed. Graphical data is shown in the selection menus, so reference to the manuals isn't required.

The championship begins on the first track, Mute City, and finishing in the top three is the requirement to move up each stage onto the final track. There are three leagues of increasing difficulty and 15 tracks in all.

The pit stop is placed just after the start line and can be entered and exited while moving along at full speed. While in the pit stop power is replenished and it is best to travel slowly if there's a lot of stocking to be done. Power isn't needed to drive the craft, but it is zapped when hitting barriers and other draining obstacles throughout the tracks.

All in all, F-Zero is a jazzed-up futuristic racing game which would make its money in any arcade booth.









SUPER TENNIS

NINTENDO - £39.99

This is the least popular of the SNES's four launch releases. Maybe because Tennis is boring, maybe because it doesn't show off the hardware as much as the others. I think that both presumptions may be the case. Super Tennis is a great game, and again it is one of arcade standards.

It's similar in gameplay to Pro-Tennis Tour where matches are played on a competition basis in different continents and play surfaces. There's a doubles option, and unlike Super Soccer, opponents can play against, as well as with, each other in competition matches. There's 20 opponents and therefore 20 different playing styles to tackle; 10 men and 10 women.

Super Tennis makes the grade and although it doesn't set the heather alight (as my Granny would say), it is an excellent version of a seasonally popular sports game.

ART Attack!

Since its release in 1986, OCPs Advanced Art Studio has been widely regarded as far and away the best CPC art package. With their new package, Picasso, SD microsystems are trying to claim the honours; after all, how can a 1986 program compete with one from 1991?

PICASSO £14.95 + £1 [P&P] - disc - 64k +

Picasso, the manual claims, runs on all CPCs and PLUS machines. It does too, except that 464 owners need a disc drive! Once the program loads, an icon bar, similar to those in 16-bit programs such as MacPaint or Deluxe Paint, appears down the side of the screen. All operations are selected from this by moving the main crosshair off the drawing area onto it using the keyboard - there's no joystick or mouse support! At this point, the crosshair becomes an icon highlighter. Each icon brings up a further menu, from which the program's features can be selected.

What are the features? First and foremost, Picasso only works in MODE 1. Those wanting to produce highly colourful masterpieces in MODE 0, or plans and diagrams in MODE 2, will need to look elsewhere. But don't dismiss it because of that; many of the features that it provides are well worth taking into consideration.

Picasso has 4k of memory devoted to "picture memory". This means that up to ten individual pictures of any size (so long as they don't exceed 4k) can be loaded into memory and, at any time, picked out and placed anywhere on the screen. Where this feature really comes into its own is in the "manipulation" options. Each picture can be rotated by any degree (all other packages only rotate in 90-degree steps), rescale, and using the powerful "points" option, pictures can be given perspective. This feature is undoubtedly Picasso's strong point.

Picasso's fill options are also powerful. In addition to the usual, single-colour fill, there is a pattern fill which works in a different way to other packages. Whereas most packages allow selection from a set of pre-defined patterns (which can be edited), with Picasso the pattern must be grabbed from the screen. This allows the creation of large and complex patterns. However, there is the disadvantage that an area cannot be filled with a pattern containing the original colour of the area: so if a pattern contains all four colours, it can't be used to fill! The other two fills are "random", giving an airbrush-type effect with the proportions of the two colours available and "spherical", which produces a sunburst effect, with one colour being more concentrated towards the centre of the fill. Great care must be taken when filling, because there's no "undo" function: if the fill leaks out, the whole picture could be destroyed.

Line drawing features are pretty standard, although lines are not rubber-banded which makes it more difficult to see the precise effect of what is being drawn. One nice option is

ADVANCED ART STUDIO £20 - disc - 128k

AAS, a follow-up to the original Art Studio, was written way back in 1986. Immediately it became the most popular CPC 128k art program, and it's not difficult to see why. It's fast, friendly, and very powerful.

Everything is controlled by a pointer, using keyboard, joystick, or mouse. This pointer can be used to "pull-down" menus from the menu bar at the top of the screen. There are 11 options on this menu, many of which have further sub-menus. This system makes it easy to get to grips with, but is also fast and means that options can be selected quickly.

Picture editing is available in all three modes. Detailed work can be done using the fast "magnify" option which has three scale choices. Any area of the screen can be defined as a window, and then rescaled, saved individually, cleared, moved, etc.. File access is simplified by the use of a 16-bit style file requester. A simplified version is present in Picasso, but AAS's utility is much friendlier and offers the option to erase files as well. One thoughtful option is that when saving art to disc it is automatically compressed, saving disc space. Especially useful because, without a bit of tweaking, AAS refuses to accept large-format B-drives. Unfortunately, compressed screens can't easily be used from within custom programs - you need to have a bit of programming know-how to do this.

Text handling is good. Standard 8x8 fonts are compatible (to the extent that many people now call them "Art Studio fonts"!), and these can be typed in up to triple width or height. Automatic bold and italic options are also supported. There is also a character designer, simple (although not as basic as Picasso's) but useable nonetheless. The palette system on



AAS, as well as allowing the setting of standard colours, permits colour cycling. Using this, simple animations can be produced. Again, it's not as easy to use this from custom programs, but from within AAS the effects can be quite impressive.

The fill routine is excellent

MICRODESIGN
£29.99 - disc - 128k

MicroDesign is a funny beast - it's a half DTP, half MODE 2 art package. Unlike the other art packages reviewed, MicroDesign works on a large page area rather than a single screen-size. Previous versions have been, although excellent for art, rather lacking in the DTP department. New software house CampurSoft has since relaunched it with an add-on pack, giving it more DTP features, together with file conversion utilities.

Much of MicroDesign revolves around the use of icons. These are a set of small pictures that is loaded into the program, which can then be rotated, inverted, and placed on the screen. The icons can also be used as large lettering. A comprehensive range is provided with the package.



In general, MicroDesign is fast and user-friendly, with a list of possible keys being printed on the right of the screen at all times. Drawing facilities are what you'd expect, and the zoom mode, while not being quite up to the standard of AAS's magnify, is acceptable. Print facilities, as you'd expect in a DTP contender, are outstanding. For detailed MODE 2 art, MicroDesign is a fine choice, for anything else it doesn't come into it.

"curve", which will draw a curve between three specified points. There is also an option called "asteroid", a parabola-style shape.

Text handling, unfortunately, is nothing special. Standard 8x8 fonts can be loaded (a few are supplied with the package), and can be used in normal or "highlighted" mode. The latter giving the text a different coloured outline. In addition, a thin font ("concise") is available. To obtain effects such as double height, a process of putting text into picture memory, reselecting it, resizing and placing it on the screen must be accomplished. However, a bog-standard font editor is provided in the program.

Filtering is a powerful option (also available on Advanced Art Studio) to change any ink in a specified area to another. It's faster than filling, but not as versatile. The zoom (magnify) function is a simple enlargement at the top of the screen, but altering pixels is a very slow process.

Picasso possesses some excellent features. The manipulation options are very versatile, and the different sorts of fill can be used to produce excellent effects. There are a few things that spoil it though: some bugs remain (such as erased graphics reappearing in an area of the screen) which SD Microsystems need to sort out, and it's slow in some instances. Also disappointing is that a small part of the screen (where the icon bar is) cannot be edited, and that a picture must be saved before exiting and loading into a new program to print it out!

Overall, Picasso is a useful program, especially for more technical drawings: I should imagine that some experienced CPC artists are already dribbling at some of its original features. As a first art package, though, there are a number of alternatives...

and the patterns supplied, although a bit gaudy, are very well drawn. Line drawing routines are fairly standard, but fast. The freehand routines are great, something Picasso lacks, including the option to draw with any brush required. There's an "undo" option to clear up mistakes! Printing is achieved from within the program and offers a wide range of features, including variable x and y axis scales. AAS is an excellent package. It's not much use if you have a 64k CPC, and some of Picasso's features (notably the manipulation options and the spherical and random fills) are absent. However, for 128k owners, it is a superb all-round buy with enough features to keep you playing with it for months!

ART THE EASY WAY (ATEW)
£5.95 - tape - 128k
£8.95 - disc - 128k

A homebrew creation by John Packham, ATEW is a MODE 0, 128K package. It's cheap, the title proclaims that it's friendly, and it seems to have a decent enough range of features. Sounds good?

ATEW works in a similar way to Degas on the ST, where options are selected from a separate menu to the main drawing screen. Unfortunately, this is where the comparison ends. ATEW isn't in a position to challenge any of the main packages. Both the cursor and rubber-banded lines are very flickery, which can make the visibility of lines (in particular) quite tricky. As the program is largely written in BASIC, it's slow too. The features are standard ones such as line drawing, area copy, enlargement, etc. Zoom is available, but it's slow.

A year or two ago, this would have been a nice package for the dabbler, in that it's cheap and performs many basic art functions, albeit slowly. These days, however, it's hard to recommend, particularly when better PD alternatives are available cheaply.

GPAINT
£3.00 - tape/disc - 64k +

This was written in Germany and differs in two ways from the rest. Firstly, it's 464 compatible. Secondly, it's PD and hence very cheap.

Considering that it all fits into 64k, GPaint packs a lot of punch. Everything you'd expect is there - patterned fill, area copy, circle, zoom, etc. - together with some less common features, such as the very welcome "undo", and the excellent "load section" feature, which allows you to load a section from one picture into the current one. GPaint also has superb text handling capabilities. Fonts are proportional - for example letter "i" takes up less space than letter "m" - and overprinting of text can be used to create impressive shadow effects. Some PD libraries supply GPaint with a proportional font editor, and a number of fonts are supplied with the program.

If you only use an art package occasionally, or if you have an unexpanded 464, then GPaint is probably the best choice. Cheap and cheerful is certainly an accurate description. It's probably a lot better than you'd expect for a few pounds.

CONTACTS

PICASSO - SD Microsystems, PO Box 24, Holbeach, Lincs. - 0406 32252

ADVANCED ART STUDIO - see advertisers for mail order companies

MICRODESIGN PLUS - Campursoft, 16 Slatefield Street, Gallowgate, Glasgow G31 1UA - 041-554 4735

ART THE EASY WAY - John Packham, 66 Hightown Towers, Warburton Road, Southampton, Hants. SO2 6HH.

GPAINT - try PD libraries in Public Sector

SOFTWARE CITY

CALL US ON:
0902 25304





SOFTWARE CITY
Unit 4, Business Development Centre
21 Temple Street, Wolverhampton WV2 4AN
TEL: (0902) 25304 FAX: (0902) 712751

BUDGET TITLES

1st Division Manager	£3.99
2 Player Soccer Squad	£3.99
3-D Pool	£3.99
Action Fighter	£3.99
Afterburner	£3.99
Airbourne Ranger	£3.99
Altered Beast	£3.99
A.P.B.	£3.99
Arkanoid 1 or 2	£3.99
Barbarian	£2.99
Barbarian 2	£3.99
Batman the Caped Crusader	£3.99
Batman The Movie	£3.99
Biff	£3.99
Bobsleigh	£3.99
Boulderdash	£2.99
Boxing Manager	£3.99
Bubble Bobble	£3.99
Bubble Dizzy	£3.99
Cabal	£3.99
California Games	£3.99
Championship Golf	£3.99
Chase H.Q.	£3.99
Chuckie Egg 1 or 2	£3.99
Colossus Bridge	NEW £3.99
Colossus Bridge (Disc)	NEW £3.99
Colossus Chess 4	£3.99
Colossus Chess 4 (Disc)	£7.99
Commando	£2.99
Continental Circus	£3.99
Cricket Captain	£3.99
Cricket Master	£2.99
Cup Football	£3.99
Daley Thompsons Decathlon	£3.99
Dizzy Panic	£3.99
Double Dare	£3.99
Double Dragon 1 or 2	£3.99
Dragon Ninja	£3.99
Dragons of Flame	£3.99
Edd The Duck	£3.99
Escape Planet Robot Monsters	£3.99
F-1 Tornado	£2.99
F-16 Combat Pilot	£3.99
F-16 Combat Pilot (Disc)	£7.99
Fantasy World Dizzy	£3.99
Fireman Sam	£3.99
First Past the Post	£3.99
Football Director	£3.99
Footballer of the Year 2	£3.99
Games Summer Edition	£3.99
Games Winter Edition	£3.99
Gary Linekers Hotshots	£3.99
Gauntlet 1, 2 & Deeper Dungeons	£4.99
Ghostbusters 2	£3.99
Ghouls and Ghosts	£3.99
Golden Axe	£3.99
Hard Drivin'	£3.99
Heroes Of The Lance	£3.99
Hunt For Red October	£3.99
Impossamole	£3.99
Indiana Jones Last Crusade	£3.99
International Karate+	£3.99

BUDGET TITLES

International Manager	£3.99
International Ninja Rabbits	£3.99
Italia 1990	£3.99
Jack The Nipper 1 or 2	£2.99
Jaws	£2.99
Jimmy's Soccer Manager	£3.99
Jocky Wilsons Compendium of Darts	£3.99
Kenny Dalglish Soccer Manager	£2.99
Kentucky Racing	£2.99
Kick Off	£3.99
Kwik Snax	£3.99
League Football	£3.99
Lotus Esprit	£3.99
Man-Utd	£3.99
The Match	£3.99
Matchday 2	£3.99
Microprose Soccer	NEW £3.99
Midnight Resistance	£3.99
Mini Office	£2.99
Monty Python	£3.99
Moonwalker	£3.99
Multi Player Soccer Manager	NEW £3.99
Myth	£3.99
New Zealand Story	£3.99
Nigel Mansell Grand Prix	£2.99
On The Bench	£3.99
Operation Thunderbolt	£3.99
Operations Wolf	£3.99
Outrun	£3.99
Paperboy	£2.99
Pegasus Bridge (War Game)	£3.99
Popeye 2	£2.99
Postman Pat 1 or 2	£2.99
Powerdrift	£3.99
Predator	£3.99
Pro Golf (Codemasters)	£3.99
Professional Footballer	£3.99
Pub Games	£2.99
Puffy's Saga	£3.99
Puzznic	NEW £3.99
Quattro Adventure (Dizzy Etc.)	£3.99
Quattro Cartoon (Little Puff)	£3.99
Quattro Coin Ops (Fast Food Etc.)	£3.99
Quattro Combat	£3.99
Quattro Fantastic (Pub Trivia Etc.)	£3.99
Quattro Power	£3.99
Quattro Skills (Int. Rugby Sim Etc.)	£3.99
Quattro Sports	£3.99
R-Type	£3.99
Rainbow Island	£3.99
Rambo 3	£3.99
Red Heat	£3.99
Renegade 1 or 3	£3.99
Rick Dangerous	£3.99
Road Runner Wile Coyote	£3.99
Robocop	£3.99
Rock Star Ate My Hamster	£3.99
Rugby Coach	£3.99
Rugby Manager	£2.99
Run The Gauntlet	£3.99
Scooby Doo and Scrappy Doo	£3.99
Shadow Of The Beast	£3.99

BUDGET TITLES

Shadow Warriors	£3.99
Shinobi	£3.99
Silkworm	£3.99
Skate Wars	NEW £3.99
Snooker Management	£3.99
Soccer Q	£3.99
Soccer Match	£3.99
Soccer Pinball	£3.99
Soccer Rivals	£3.99
Space Harrier 2	£3.99
Sporting Triangles	£3.99
Sporting Triangles (Disc)	£7.99
Spy Who Loved Me	£3.99
St. Dragon	£3.99
Star Wars	£3.99
Steve Davis Snooker	£2.99
Strider	£3.99
Striker Manager	£3.99
Stunt Car Racer	£3.99
Super Off Road Racer	£3.99
Super Seymour	£3.99
Switchblade	£3.99
Sword and Sorcery	£3.99
Target Renegade	£3.99
Top Gun	£3.99
Toyota Celica	£3.99
Tracksuit Manager	£2.99
Treasure Island Dizzy	£3.99
T.T. Racer	£2.99
Treble Champion	£3.99
Turbo Outrun	£3.99
Turrican 1 or 2	£3.99
Tusker	£3.99
The Untouchables	£3.99
Vendetta	£3.99
Viz	£4.99
WEC Le Mans	£2.99
Wonderboy	£3.99
World Class Leaderboard, Leaderboard & Tournament	£4.99
World Cup	NEW £3.99
X-Out	£3.99
Yogi and The Greed Monster	£2.99
Yogi Great Escape	£2.99
Zoids	NEW £3.99

SOFTWARE CITY SPECIALS

Cyberworld (Cass)	£1.99
Dark Fusion	£0.99
Emlyn Hughes (Cass)	£3.99
Emlyn Hughes (Disc)	£4.99
European Super League (128K)	£3.99
European Super League (Disc)	£4.99
International 3-D Tennis	£3.99
Kick Off 2	£4.99
Gremlins 2	£3.99
Kenny Dalglish Soccer Match	£2.99
Starstrike 1 or 2	£2.99

COMPILATIONS

TWO HOT TWO HANDLE
GOLDEN AXE, TOTAL RECALL, SHADOW WARRIOR & SUPER OFF ROAD RACER
CASS £10.99 DISC £13.99

T.N.T. 2
HYDRA, BADLANDS, SKULL AND CROSSBONES, STUN RUNNER & ESCAPE-ROBOT MONSTERS
CASS £8.99 DISC £12.99

4 MOST WORLD SPORTS
GRID IRON 2, BASEBALL, UCHI MATA JUDO & BASKETBALL
CASS £3.99

MULTIMIX 5
MONTY ON THE RUN, JACK THE NIPPER 2 & AUF WIEDERSEHEN MONTY
CASS £4.99

CAPCOM COLLECTION
STRIDER 1 AND 2, GHOULS 'N' GHOSTS, FORGOTTEN WORLDS, U.N. SQUADRON, DYNASTY WARS, LED STORM & LAST DUEL
CASS £12.99 DISC £17.99

SOCCER 6
TREBLE CHAMPIONS, EUROPEAN CHAMPIONS, WORLD SOCCER LEAGUE, EURO BOSS, WORLD CHAMPIONS & TREVOR BROOKING
CASS £7.99

4 MOST BALLS, BOOTS & BRAINS
SOCCER CHALLENGE, SOCCER BOSS, RUGBY BOSS & AUSTRALIAN RULES FOOTBALL
CASS £3.99

SOCCER STARS
KICK OFF 2, GAZZA 2, MICROPROSE SOCCER & EMLYN HUGHES INTERNATIONAL SOCCER
CASS £8.99 DISC £12.99

NINJA COLLECTION
SHADOW WARRIOR, DOUBLE DRAGON & DRAGON NINJA
CASS £7.99

DIZZY'S EXCELLENT ADVENTURE
DIZZY DOWN THE RAPIDS, KWIK SNAX, BUBBLE DIZZY, DIZZY PANIC & DIZZY AND THE YOLK FOLK
CASS £7.99

KIDS PACK
POSTMAN PAT, SOOTY AND SWEEP, POPEYE 2, COUNT DUCKULA, THE WOMBLES & SUPERTED
CASS £8.99

MAX PACK COMPILATION
TURRICAN 2, ST DRAGON, SWIV & NIGHTSHIFT
CASS £11.99 DISC £17.50

TENGEN TRILOGY
KLAX, ESCAPE PLANET ROBOT MONSTERS & CYBERBALL
CASS £5.50

CHART ATTACK
LOTUS ESPRIT TURBO CHALLENGE, SUPERCARS, SHADOW OF THE BEAST, IMPOSSAMOLE & GHOULS AND GHOSTS
CASS £10.99 DISC £13.99

THRILLTIME GOLD 1
PAPERBOY, GHOSTS AND GOBLINS, BOMBJACK, BATTY & TURBO ESPRIT
CASS £5.50

AIR/SEA SUPREMACY
SILENT SERVICE, CARRIER COMMAND, GUNSHIP, P47 THUNDERBOLT & F15 STRIKE EAGLE
CASS £13.99 DISC £17.99

MOVIE PREMIER
TEENAGE MUTANT HERO TURTLES, GREMLINS II, BACK TO THE FUTURE II & INDIANA JONES
CASS £10.99 DISC £13.99

GRANDSTAND
WORLD CLASS LEADERBOARD, PRO TENNIS TOUR, CONTINENTAL CIRCUS & GAZZA'S SUPER SOCCER
CASS £10.99 DISC £13.99

WHEELS OF FIRE
TURBO OUTRUN, CHASE H.Q., HARD DRIVIN' & POWERDRIFT
CASS £10.99

ADDICTED TO FUN
BUBBLE BOBBLE, RAINBOW ISLANDS & NEW ZEALAND STORY
CASS £7.99

HANNA BARBERA CARTOON COLLECTION
YOGI'S GREAT ESCAPE, HONG KONG PHOOEY, RUFF AND READY & BEVERLEY HILL CATS
CASS £7.99 DISC £10.99

IT'S TV SHOWTIME
KRYPTON FACTOR, BOBS FULL HOUSE, EVERY SECOND COUNTS & BULLSEYE
CASS £7.99

DIZZY COLLECTION
DIZZY, FAST FOOD, FANTASY WORLD DIZZY, TREASURE ISLAND DIZZY & MAGICLAND DIZZY
CASS £7.99

FIST OF FURY
DOUBLE DRAGON 2, SHINOBI, DYNAMITE DUX, NINJA WARRIORS
CASS £10.99

HOLLYWOOD COLLECTION
ROBOCOP, INDIANA JONES LAST CRUSADE, BATMAN THE MOVIE & GHOSTBUSTERS 2
CASS £10.99 DISC £13.99

THE CODE MACHINE
FULL FEATURE MACHINE CODE PROGRAMMING DEVELOPMENT PACKAGE: EDITOR/ASSEMBLER MONITOR/DISASSEMBLER
464/664/6128 CASS ONLY £5.50

VIRTUAL
DRILLER, TOTAL ECLIPSE, CASTLE MASTER & THE CRYPT
CASS ONLY £5.50

FULL PRICE

	CASS	DISC
3-D Construction Kit	£17.99	£17.99
Battle Command	N/A	£10.99
Battle Of The Bulge	£9.99	£10.99
Crete 1941	£9.99	£10.99
Double Dragon 3	£8.99	£10.99
Final Fight	£8.99	£11.99
Football Director 2 (128K)	N/A	£7.99
Fun School 3 (U5)	£8.99	£11.99
Fun School 3 (5-7)	£8.99	£11.99
Fun School 3 (7+)	£8.99	£11.99
Fun School 4 (U5)	£8.99	£11.99
Fun School 4 (5-7)	£8.99	£11.99
Fun School 4 (7-11)	£8.99	£11.99
Grand Prix (D&H)	£7.99	N/A
Hero Quest + Data Disc	£8.99	N/A
Hero Quest Witchlord Expansion	£5.99	£7.99
Hudson Hawk	£7.99	£10.99
Jetsons	£6.99	£7.99
Manchester Utd Europe	£8.99	£11.99
North and South	£8.99	£11.99
Outrun Europa	£8.99	£11.99
Pit Fighter	£7.99	£12.99
Potsworth	£6.99	£7.99
Prince of Persia	£7.99	£10.99
Rodland	£8.99	£10.99
Shoe People	NEW £7.99	£10.99
Sim City	£8.99	£12.99
Simpsons	£7.99	£10.99
Smash T.V.	£7.99	£10.99
Space Crusade	NEW £7.99	£10.99
Super Space Invaders	£7.99	N/A
Terminator 2	£7.99	£10.99
Titus the Fox	N/A	£10.99
Turrican 2	£5.99	£8.99
World Class Rugby	£7.99	£10.99
WWF Wrestlemania	£8.99	£10.99

ORDER FORM AND INFORMATION

All orders sent **FIRST CLASS** subject to availability. Just fill in the coupon and send it to:
Software City, Unit 4, B.D.C., 21 Temple St, Wolverhampton. WV2 4AN

ORDER FORM (Block Capitals)

NAME: ______________

ADDRESS: ______________

____

____

POSTCODE: ______________

TEL: ______________

Name of Game	Computer	Value
	Postage	
	TOTAL	

POSTAGE RATES: Please add 50p for post & packaging on all orders under £5.
Overseas add £1.50 per item.
PAYING BY CHEQUE: Cheques payable to **Software City**

Card Type ______________

Expiry date ______________

ACU

....

Signature ______________

Date ______________



European Orders Mastercard

SOFTWARE CITY

CALL US ON:
0902 25304

SOFTWARE CITY
Unit 4, Business Development Centre
21 Temple Street, Wolverhampton WV2 4AN
TEL: (0902) 25304 FAX: (0902) 712751

CODEMASTERS
£3.99(c)

STRYK[ER]
in the Crypt of Tr[ogan]

Trogan is on the loose. With his army of evil ghouls he's over-running the land with evil and disharmony. Shock..horror..and there's more...he dwells in his Crypt guarded by the meanest and deadliest of his followers.

As Stryker, mighty warlock and master of spells, you have to enter into the Crypt, collect the sixteen pieces of the parchment of truth and defeat the evil incarnate, Trogan, thus ridding the land of evil once and for all - or at least until another saviour-type game is released.

Stryker isn't a slash'n'slay hero, depending much more on magic and courage to save the day. There's loads of power ups and weaponry/magic to be collected within the crypt, but Trogan's evil disciples serve only to hinder your efforts.

There's five levels to get through before thinking about what Trogan looks, or fights like, but his hordes of meat-heads, skulls, skeletons and mutants are enough to see anyone toiling away for ages... especially since Stryker is initially equipped with six lives.

The game is played on the top screen area with the bottom holding the game status/info: there are six meters measuring such things as parchment collected, energy, magic, combat strength. There's also a level indicator, a score, and number of lives remaining indicator.

Of the five levels, level one is the simplest with each getting progressively more complex. The end-of-level guardians are pretty mean, but not invincible if a few basic techniques are followed. As a bonus, extra lives are usually gained after destroying the mutant guards. If not in possession of spells or weapons, the quickest way to kill enemies is with the lower stab - crouching down and stabbing into the base of the baddies. This slows the game down as every so often you must stop and crouch. This is lessened if all of the power ups are collected, but sometimes to do so requires more effort than is really worthwhile.

This is, to all intents and purposes, a Switchblade clone, but is it better than the original? Well, it's as good as, but has lost a little in the originality department. If you have Switchblade, then unless you've finished it, Stryker may be a little too similar - who knows you may like it better. One thing's for sure, at budget price you won't be wasting any money.



Amy sez:
Far out, a good Switchblade clone.

GRAFIX	SONIX	GAMEPLAY	DIFFICULTY	
8	8	9	7	93%

Parents sez:
Yuch! Horrible and sadistic. I'll send a copy to Mary Whitehouse - she'll get it banned!

ATTACK! GAME

ER

rogan

The programmers of Stryker are the same team that worked on the CPC version of Switchblade, and the likeness is one which hits home straight away. The techno-underground futuristic scenario has given way to a magical and mystical labyrinth filled with wizardry and spell-casting. In fact, underneath the cosmetics, Stryker is a lot like Switchblade, but there are a few subtle differences. One regards the PLUS machine, where there's lots more colour and some pretty terrific displays, such as graduations, only previously seen on cart games.

This new technological breakthrough is possible because of the newly discovered system calls that use the extra hardware on PLUS machines. These calls access the extra graphics capability of the PLUS chips through the software.

This doesn't affect the graphics on normal CPCs, but the graphics are still better than those in Switchblade due to the better use of colour.

What is affected though, is speed; the game runs faster on a PLUS than it does on a standard CPC. This speed difference is marginal and during the game cannot really be detected - but Stryker is slightly faster on the PLUS! This feature was noticed when we ran the game side by side on the two machines to check out the difference in graphics.

MANCHESTER UNITED

GBH - £3.99 (c)

Oh dear, oh dear. Thinking that Manchester United had won the Division One title, GBH made an effort to get this game out on budget to coincide with the end of the season, but as we all know by now, the script was changed at short notice. The game was still released and seems to be doing pretty well.

The Europe version is out on full-price, so what don't you get in the budget version? Well, not a lot really. The gameplay and graphics appear to be the same, with minor differences in the menus and opponents. In MU Europe, opposition comes in the three of the European cups, whereas in this version it's the English League and Home Cups.

The game is menu-driven, and each game can be played as the season develops. League statistics, training, buying and selling players, are all accessible from the main menu. After setting the duration of each half, the action is played on a horizontally scrolling pitch, with Man U in Red (Main) or White (Alternate) colours. The game's really playable, if a little tricky to get the right shot at the right time! Finger trouble methinks!



GRAFIX 9 · SONIX 8 · GAMEPLAY 9 · DIFFICULTY 5 · 88%

PUZZNIC



THE HIT SQUAD - £3.99

Puzzle games were, for a short time, the most popular game type. Game publishers went through a "let's make a puzzle game" era all about the same time. One of the best of these was Puzznic, a coin-op conversion, which eluded us when the Top 50 was being compiled. But thankfully it's now out on budget.

Each puzzle is started with several sets of matching blocks positioned in the most awkward places within a small playing arena. Blocks can be moved left and right (but not up and down) by moving the joystick on top of a block and pressing Fire. It is possible to move a block down by pushing it off a platform, or move it up by shifting it onto an upwardly moving platform. The aim is to match up similar blocks, by placing them adjacent to each other, thus eliminating them from the play area within a given time-limit.

Once all the blocks are eliminated, the time stops, points are awarded and the next puzzle can be played.

It ain't as simple as it sounds, for instance, on many levels there are an odd number of blocks in a set. This means that instead of simply matching two blocks, three must be adjacently placed to eliminate the odd block. Extra points can be gained by setting up several block eliminations,



which is quite tricky. This is where blocks are eliminated leaving gaps which other blocks fall into (unaided by the joystick) and are eliminated too. The blocks don't disappear until the last falling block stops, so all blocks can be eliminated with a barrage of fast moves.

Puzznic is a thinking game, where it's best to think of what you're going to do and then do it. It passes time and stimulates brain activity, but it is one only to get out on rainy days.

AMY SEZ: Lurverly game, lurverly game!

techno

PRO TENNIS TOUR

HIT SQUAD - £3.99

Tennis is an occasional game. It's not the normal blaster that you get every day, but every so often you'll fancy a go. Pro Tennis Tour has been a timely release for The Hit Squad - what with Wimbledon happening - so, should do very well.

Pro Tennis Tour replicates the Tennis circuit, where players compete in four tournaments around the globe, trying to win as much cash as they can. The tournaments offer different play to all players as courts have different surfaces, made from grass, cement and clay. Starting from a 64 ranking, it's a great boost when you start beating opponents thus moving up the world ranking tables.

It's the best game of tennis on the CPC, or any other computer, come to that.

There's no management features, you don't have to train, you don't have to select teams. Just pick up a joystick and bat away - until it becomes boring again. I honestly lost hours while playing, but probably won't look at the game for another month - but I will be playing it again!

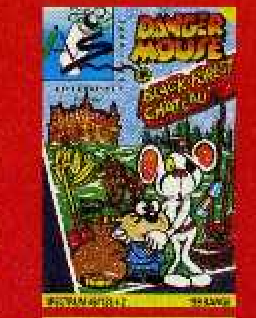


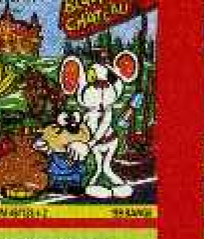


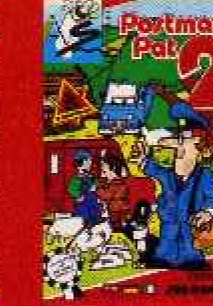




90%



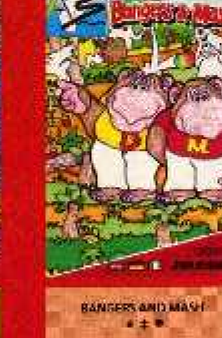







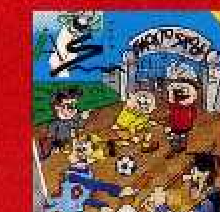


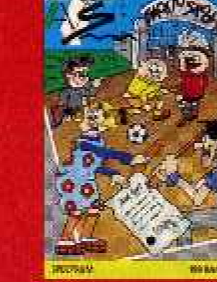




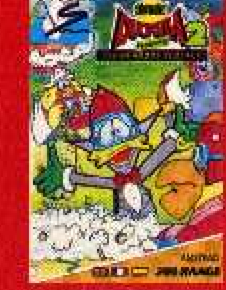






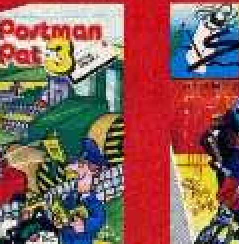
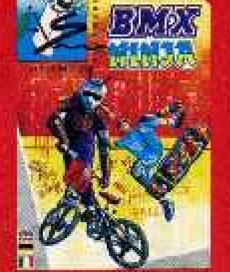
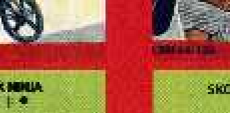












KIDZ WANNA HAVE FUN TOO
ALTERNATIVE SOFTWARE
DANGER MOUSE IN BLACK FOREST CHATEAU
POSTMAN PAT 2
ALVIN AND THE CHIPMUNKS
POPEYE
BANGERS AND MASH
THOMAS THE TANK 2 "THE RACE"
£2.99
£3.99
SOOTY AND SWEEP 2
HOWARD THE DUCK
COUNT DUCKULA 2
PUNCH & JUDY
BACK TO SCHOOL
IF AFTER TRYING YOUR LOCAL COMPUTER SOFTWARE RETAILER, YOU STILL HAVE DIFFICULTY OBTAINING ANY OF OUR GAMES PLEASE SEND A CHEQUE OR POSTAL ORDER MADE PAYABLE TO:
ALTERNATIVE SOFTWARE,
AT THE ADDRESS BELOW STATING YOUR NAME AND ADDRESS, WITH THE TITLES AND FORMATS YOU REQUIRE.
CLASSIC ARCADIA TRIPLE DECKER
POSTMAN PAT 3
BMX NINJA
SKOOL DAZE
* = Spec
= = C64
■ = AMS
+ = MSX
= BBC/Elec
◆ = Atari XE
= C16
ALTERNATIVE SOFTWARE
UNITS 5-7, BAILEYGATE INDUSTRIAL ESTATE, PONTEFRACT, WEST YORKSHIRE. WF8 2LN.
TELEPHONE 0977 797777 FACSIMILE 0977 790243

TOP 50 GAMES CHART

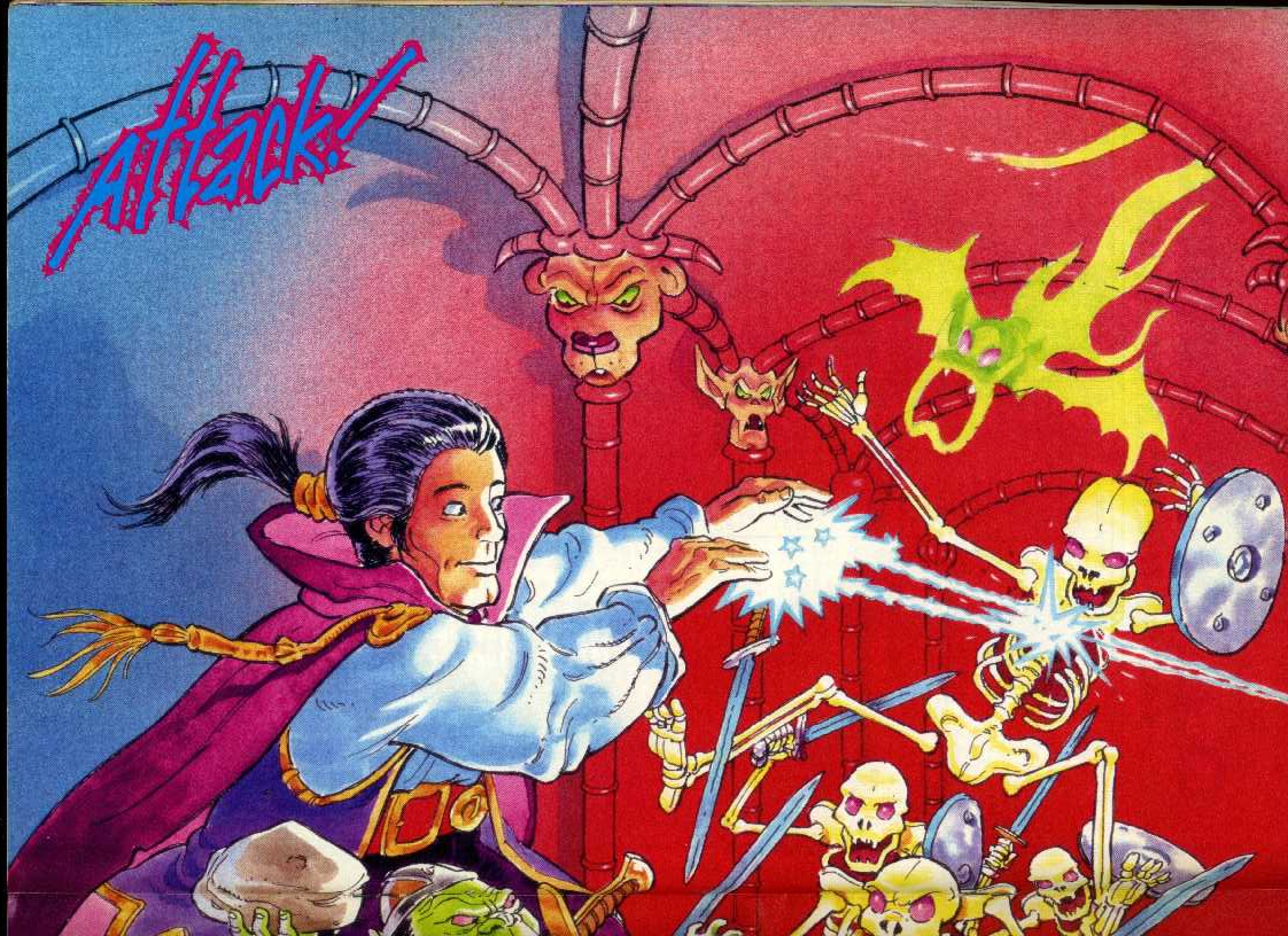
	GAME	COMPANY	CASS.	DISC		RATING
1	LEMMINGS	PSYGNOSIS	£15.99	£18.99	10/8/10/5	98%
2	PRINCE OF PERSIA	DOMARK	£10.99	£15.31	10/9/10/7	97%
3	SMASH TV	OCEAN	£10.99	£15.99	9/8/10/8	96%
4	RICK DANGEROUS	KIXX	£3.99		10/7/10/8	95%
5	RAINBOW ISLANDS	HIT SQUAD	£3.99		9/9/10/5	95%
6	TURRICAN II	KIXX	£3.99		8/8/10/7	94%
7	SWITCHBLADE	GBH	£3.99			94%
8	CONTINENTAL CIRCUS	TRONIX	£3.99		8/9/9/8	94%
9	NORTH & SOUTH	INFOGRAMES	£9.99	£14.99	8/9/9/3	93%
10	HUDSON HAWK	OCEAN	£10.99	£15.99	8/8/9/5	93%
11	TURRICAN	KIXX	£3.99		8/8/9/8	93%
12	TITUS THE FOX	PALACE	£10.99	£15.99	10/9/8/6	93%
13	KICK OFF 2	ANCO	£10.99	£16.99	8/7/8/5	93%
14	STRYKER (NEW)	CODEMASTERS	£3.99		8/8/9/7	93%
15	WWF WRESTLEMANIA	OCEAN	£10.99	£15.99	9/7/9/4	92%
16	G-LOC	US GOLD	£10.99	£15.99	8/8/8/5	92%
17	F-16 COMBAT PILOT	DIGITAL INT.	£6.99	£10.99	8/8/9/7	92%
18	RBI BASEBALL	DOMARK	£10.99	£17.99	8/8/9/5	92%
19	IMPOSSAMOLE	GBH	£3.99		8/8/9/8	92%
20	IK+	HIT SQUAD	£3.99		8/7/9/5	92%
21	SPACE CRUSADE	GREMLIN	£10.99	£15.99	7/6/10/6	91%
22	TERMINATOR 2	OCEAN	£10.99	£15.99	9/7/9/7	91%
23	PLOTTING	OCEAN	£24.99 (cart)		8/8/8/4	91%
24	MAN.UNTD EUROPE	KRISALIS	£11.99	£16.99	8/7/9/7	91%
25	OP.THUNDERBOLT	HIT SQUAD	£3.99		8/7/8/7	91%
26	POWERDRIFT	HIT SQUAD	£3.99		8/7/9/5	90%
27	CHASE HQ	HIT SQUAD	£3.99		8/7/9/5	90%
28	PRO TENNIS TOUR	HIT SQUAD	£3.99		7/7/8/4	90%
29	HEROES OF THE LANCE	KIXX	£3.99		8/8/9/7	90%
30	SUPERCARS	GREMLIN	£9.99	£14.99	7/8/9/5	89%
31	STUNT CAR RACER	KIXX	£3.99		7/8/9/5	89%
32	CASTLE MASTER	HIT SQUAD	£3.99		7/8/9/5	89%
33	ROBOCOP 2	OCEAN	£24.99 (cart)		9/9/8/7	89%
34	PUZZNIC (NEW)	HIT SQUAD	£3.99		8/8/9/5	88%
35	LICENCE TO KILL	HIT SQUAD	£3.99		8/8/9/5	88%
36	BATMAN - THE MOVIE	HIT SQUAD	£3.99		8/8/9/5	88%
37	NAVY MOVES	HIT SQUAD	£3.99		8/7/9/7	88%
38	LOTUS ESPRIT-TURBO CHALLENGE	GBH	£3.99		6/8/9/5	88%
39	HERO QUEST	GREMLIN	£9.99	£14.99	7/5/9/7	88%
40	SHADOW WARRIORS	HIT SQUAD	£3.99		8/7/8/8	88%
41	SIM CITY	INFOGRAMES	£9.99	£14.99	6/8/9/5	87%
42	ROBOCOP	HIT SQUAD	£3.99		9/8/8/7	87%
43	NEW ZEALAND STORY	HIT SQUAD	£3.99		8/8/8/4	87%
44	DRAGON NINJA	HIT SQUAD	£3.99		8/7/8/5	87%
45	GHOSTBUSTERS II	HIT SQUAD	£3.99		8/7/8/6	86%
46	OUTRUN EUROPA	US GOLD	£11.99	£16.99	8/7/8/5	86%
47	GAUNTLET II	KIXX	£4.99		8/8/8/5	86%
48	BARBARIAN 2	OCEAN	£24.99(cart)		7/7/8/6	86%
49	MIDNIGHT RESISTANCE	HIT SQUAD	£3.99		7/8/8/6	86%
50	EMLYN HUGHES SOCCER	AUDIOGENIC	£10.17	£16.99	7/8/8/5	86%

GALLUP TOP 10 FULL-PRICE

1 [2] DIZZY'S EXCELLENT ADVENTURES CODEMASTERS · £9.99(c)
2 [1] WWF WRESTLEMANIA OCEAN · 92%
3 [3] CARTOON COLLECTION CODEMASTERS · £9.99(c)
4 [5] TERMINATOR 2 OCEAN · £10.99(c) · £15.99(d) · 91%
5 [-] SPACE CRUSADE GREMLIN · £10.99(c) · £15.99(d) · 91%
6 [4] DIZZY COLLECTION CODEMASTERS · £9.99(c)
7 [6] MAN.UNITED EUROPE KRISALIS · £11.99(c) · £16.99(d) · 91%
8 [8] THE SIMPSONS OCEAN · £10.99(c) · £15.99(d)
9 [-] KICK OFF 2 ANCO · £10.99(c) · £16.99(d) · 93%
10 [7] BIG BOX BEAU JOLLY · £16.99(c)

GALLUP TOP 10 BUDGET

1 [-] GOLDEN AXE TRONIX · £3.99
2 [-] MANCHESTER UNITED GBH · £3.99 · 85%
3 [2] ROBOCOP HIT SQUAD · £3.99 · 87%
4 [1] BUBBLE BOBBLE HIT SQUAD · £3.99
5 [10] RAINBOW ISLANDS HIT SQUAD · £3.99 · 95%
6 [9] NEW ZEALAND STORY HIT SQUAD · £3.99 · 87%
7 [-] SEYMOUR GOES TO HOLLYWOOD CODEMASTERS · £3.99
8 [-] BUBBLE DIZZY CODEMASTERS · £3.99
9 [6] MAGIC LAND DIZZY CODEMASTERS · £3.99
10 [-] QUATTRO SKILLS CODEMASTERS · £3.99


Attack!


STRYKER
IN THE CRYPT OF TROGAN

Anneva Leisure Ltd. Video & Computer World. Coldstream. Scotland. TD12 4BS.

Telephone No.0890 3232 Carriage:- please add £1.00

DMP2/3000 Ribbon Reinking Kit
Comprising of 1 Special Ribbon
- 1 Bottle of Special Ink -
Full Instructions Only £12.50

CPC/IBM Books

	R.R.P	OUR PRICE
CPC464 User Manual	17.99	12.59
Making Music	6.99	4.89
Master Machine Code	6.99	4.49

Amstrad CPC Discs

	R.R.P	OUR PRICE
3" Disc Head Cleaner	10.99	7.59
10th Frame	14.99	10.47
256K Silicon Disc 464	149.95	104.97
3D Boxing	14.99	10.49
3D Construction Kit	24.99	19.99
Acrojet	14.95	10.47
Activator	14.99	10.49
Advance Answord	29.95	20.97
Air Combat Emulator	14.99	10.49
Amsgolf	14.99	10.49
Andy Capp	14.99	10.49
Atom Smasher	14.99	10.49
Alien Storm	16.99	13.59
Back to The Future 2	15.99	11.19
Ball Breaker	14.99	10.49
Barry McGuigan	14.99	10.49
Battle of the Bulge	15.99	12.79
Beast	16.99	13.59
Bobsleigh	14.95	10.47
Boggit	14.99	10.49
Bonanza Bros	15.99	12.79
Brian Clough Football	9.99	7.99
Bubbler	14.99	10.99
Capcom Collection	24.99	19.99
Chain Reaction	14.99	10.99
Chart Attack	19.99	15.99
Championship Sprint	14.99	10.49
Champ Water Sking	14.99	10.99
Chemistry 12-16years	17.99	12.59
Chemistry Revision	19.99	13.99
Chips Challenge	16.99	13.59
Cisco Heat	15.99	12.79
Clon Op Hits	19.99	15.99
Classic Games 4	16.99	13.59
Colossus Chess 4	15.99	12.79
Colour TV Receiver	59.99	41.99
Crazy Golf	14.99	10.49
Crete 1941	15.99	12.79
Cyrus 2 Chess no cover	14.99	10.49
Darkman	15.99	12.79
Double Dragon 3	15.99	12.79
Dragon of Flame	20.99	16.79
Emlyn Hughes Soccer	15.99	12.79
European Superleague	14.99	11.99
Extreme	12.99	10.39
F15 Strike Eagle	15.99	12.79
F16 Combat Pilot	19.99	15.99
Federation	14.99	10.49
Football Manager	12.99	9.09
Footballer of the Year 2	14.99	10.49
Footballer of the Year	12.99	9.09
Fu Kung in Las Vegas	14.99	10.49
Future Knight	14.99	10.49
G Loc	16.99	11.59
Galactic Plague	14.99	10.49
Gauntlet 3	16.99	11.59
Golden Axe	15.99	12.79
Grandstand	19.99	15.99
Gunship	20.99	17.62
Harrier Attack	14.99	10.49
Hauted Hedges	14.99	10.49
Heartland	12.95	9.07
Heroes	19.99	13.99
Heroquest	15.99	12.79
Heroquest Witchlord	7.99	6.39
Hollywood Colection	20.99	16.79
Hunt for Red October	15.99	12.79
Imposible Mission 2	14.99	10.49
Infodriod	12.99	9.09
Jahangir Khan	15.99	12.79
James Bond Collection	19.99	15.99
Kick Off 2	15.99	12.79
Kinetix	12.99	9.09
Konami Coin op Hits	17.99	12.59
Laser Compiler	29.99	20.97
Light Corridor	15.99	12.79
Lone Wolf	15.99	12.79
Lotus Esprit	15.99	12.79
Mag Max	12.99	9.09
Martianoids	14.99	10.49
Manchester United	10.99	8.79
Max Pack Comp	24.99	19.99
Mega Twins	16.99	13.59
Micro Design	16.99	11.89
Microscript wordprosser/calc	49.99	34.99
Midstretchers	19.99	14.39
Movie Premier Comp	19.99	14.39
Multiface 2	49.99	34.99
Mutant Monty	14.99	10.49
N A R C	15.99	12.79
Neverending Story 2	15.99	12.79
Nightbreed Arcade	15.99	12.79
Ninja Hamster	14.99	10.49
Ninja Spirit	14.99	11.99
North & South	16.99	13.59

PLEASE STATE MAKE OF COMPUTER

Amstrad CPC Discs

	R.R.P	OUR PRICE
Planit	19.99	13.99
Pirates	20.99	16.79
Pit Fighter	17.99	14.39
Pop Up	15.99	12.79
Predator 2	11.99	9.59
Prince of Persia	15.99	12.79
Prodigy	14.99	10.49
Pulsator	14.95	10.49
Punchy	14.99	10.49
Pyraword	29.99	20.99
Quack A Jack	14.99	10.49
Qualistas	24.99	17.49
RBI2	17.99	14.39
Rick Dangerous 2	15.99	12.79
Robocop 2	19.99	13.99
Robo Zone	15.99	12.79
Roland in the Caves	14.99	10.49
Roland on the Ropes	14.99	10.49
Rombo Rom Box	29.99	20.99
Sabre Wulf	14.99	10.49
Saracen	14.99	10.49
Shadow Dancer	16.99	13.59
Shoe People	15.99	12.79
Sim City	18.99	15.19
Simpsons	15.99	12.79
Skate Wars	14.99	11.99
Smash TV	15.99	12.79
Soccer Compilation	17.99	14.39
Soccer Mania	16.99	13.59
Star Control	16.99	13.59
Space Hawks	14.99	10.49
Spannerman	14.99	10.49
Speech Synthesiser	39.99	27.99
Spy vs Spy Artic Antics	14.99	10.49
Super Heroes	19.99	15.99
Super Pipline 2	14.99	10.49
Super Sprint	14.99	10.49
Super Monaco G P	16.99	13.59
Super Off Road	14.99	11.99
Super Sega	24.99	19.99
Super Sim Pack	24.99	19.99
Super Space Invaders	17.99	14.39
Super Cars	15.99	12.79
Swap	15.99	12.79
Switchblade	15.99	12.79
Swiv	15.99	12.79
System 3 Pack	19.99	15.59
Tank Attack	14.99	11.99
Tau Ceti	14.99	10.49
Teenage Queen	18.99	15.19
Teenage Turtles	17.99	14.39
Terminator 2	15.99	12.79
Thunderjaws	17.99	14.39
Tie Break	14.99	11.99
Tolkien Trilogy	16.99	13.59
Toyota Celica Rally	15.99	12.79
The Eidolon Lucasfilm	14.99	10.49
The Fifth Quadrant	14.99	10.49
The Key Factor	14.99	10.49
The Scout Steps Out	14.99	10.49
Through the Trap Door	14.99	10.49
Timeman One	14.99	10.49
Tombstowne	14.99	10.49
Treble Champions	14.99	10.49
Trivial Pursuit	20.99	16.79
Turtles 2	15.99	12.79
Twin World	14.99	11.99
Utopia (Eprom)	29.99	20.97
Virtual Worlds	19.99	15.99
Viz	15.99	12.79
W W F Wrestlemania	15.99	12.79
X-Out	14.99	10.49

Amstrad CPC Cassettes

	R.R.P	OUR PRICE
100% Dynamite	14.99	11.99
3D Boxing	8.95	6.27
3D Construction Kit	24.99	19.99
3D Stunt Rider	8.95	6.27
Activator	8.95	6.27
Addicted to Fun	9.99	7.99
Admiral Graf Spee	8.95	6.27
Agent Orange	9.95	6.97
Air Sea Supremacy	19.99	15.99
Alien Storm	11.99	9.59
Auf Wiedershen Monty	9.99	6.99
Back to the Future 3	11.99	9.59
Battle of the Bulge	13.99	11.19
Ballbalzer	9.99	6.99
Basket Master	8.95	6.27
Better Maths	11.99	8.39
Big Box	17.99	12.95
Big Sleaze	9.95	6.97
Bonanza Bro	10.99	8.79
Bravestar	9.99	6.99
Bridge	9.95	6.97
Capcom Collection	17.99	12.95
Captain America	9.99	6.99
Cartoon Collection	9.99	7.99
Centurions	9.99	6.99
Challengers	15.99	12.79
Chart Attack	14.99	11.99
Chain Reaction	8.99	6.29
Championship Sprint	9.99	6.95
Charlie Chaplin	9.99	6.99

PLEASE STATE MAKE OF COMPUTER

Amstrad CPC Cassettes

	R.R.P	OUR PRICE
Cisco Heat	10.99	8.79
Cityslicker	8.99	6.29
Clever & Smart	9.99	6.99
Codename Mat 2	8.99	6.29
Computer Maniacs	9.99	6.99
Coin op Hits	14.99	11.99
Colossus Chess 4	10.99	8.79
Confidlon	7.99	5.59
Core	8.99	6.29
Cosmic Shock Aborder	8.99	6.29
Crazy Golf	8.99	6.29
Crete 1941	13.99	11.19
Cubit	8.99	6.29
Dark Sceptre	9.99	6.99
Darkman	10.99	8.79
Dizzy Collection	9.99	7.99
Dizzy Excellection	9.99	7.99
Dominos	11.99	9.59
Double Dragon 3	11.99	9.59
Dragon Breed	9.99	7.99
Dynasty Wars	10.99	8.79
Elektra Glide	8.99	5.29
Emlyn Hughes Soccer	10.99	8.79
European Superleague	12.99	10.39
Empire Strikes Back	9.99	6.99
Extreme	9.99	7.99
Explorer	9.99	6.29
Eye	9.99	6.99
F15 Strike Eagle	10.99	8.79
F16 Combat Pilot	14.99	11.59
Fighter Bomber	14.99	11.99
Firelord	8.99	6.29
Fist of Fury	14.99	11.99
Flimbos Quest	9.99	7.99
Football Manager 2	9.99	6.99
Football Manager 2 Exp	7.99	5.59
Frankenstein	8.99	6.29
Freddy Hardest	8.99	6.29
French Mistress Level A	10.99	7.69
Frost Byte	9.99	6.99
G Loc	11.99	9.59
Game Set & Match 2	12.99	10.39
Gauntlet 3	11.99	9.59
Golden Axe	10.99	8.79
Grandstand	14.99	11.99
Gremlin 2	10.99	8.79
Gunship	15.99	12.79
Galvan	8.99	6.29
Gary Linekers Superskills	9.99	6.99
Ge Crazy	9.99	6.99
Grand Prix Selection	9.59	6.99
Grange Hill	9.99	6.99
Guerrilla War	9.99	6.99
Haunted Hedges	8.99	6.29
High Frontier	9.99	6.99
Hive	8.99	6.29
House of Usher	7.99	5.59
Hammerfist	9.99	7.99
Hanna Barbera Col	9.99	7.99
Heroquest	10.99	8.79
Heroquest Witchlord	5.99	4.99
Hollywood Collection	15.99	12.79
Hunt for Red October	10.99	8.79
Its Showtime	10.99	8.79
Impossaball	8.99	6.29
Impossible Mission 2	9.99	6.99
Instant Recall	19.99	13.99
Jahangir Khan	11.99	9.59
James Bond Collection	12.99	10.39
Kat Trap	8.99	6.29
Kick Off 2	10.99	8.79
Khah!	8.99	6.29
Laser Compiler	24.99	17.49
Lee Enfield in Space Ace	9.99	6.29
Legend of Kage	6.99	6.29
Light Pen Grahics 464	19.99	17.99
Light Corridor	10.99	8.79
Lone Wolf	10.99	8.79
Lotus Esprit	10.99	8.79
Manchester Europe	11.99	9.59
Manchester United	10.99	8.79
Martianoids	9.99	6.29
Mask Two	9.99	6.99
Max Pack Compilation	16.99	13.59
Mega Apocalypse	9.99	6.29
Mega Hot	9.99	7.99
Mega Twins	11.99	9.59
Midnight Resistance	9.99	6.99
Miami Vice	8.99	6.29
Mindstretchers	19.99	15.99
Movie	8.99	6.29
Movie Premier Compilation	14.99	11.99
Multiplayer Soccer Man	9.99	7.99
Mystical	10.99	8.79
Netherending Story 2	10.99	8.79
Nightbreed Arcade	10.99	8.79
Nightshift	11.99	9.59
Ninja Remix	9.99	7.99
North & South	11.99	9.59
Nemesis the Warlock	8.99	6.29
Nigel Mansells Grad Prix	9.99	6.99
Ninja Hamster	8.99	6.29
Nodes of Yesod	8.99	6.29
Nosferatu	9.95	6.97
Not a Penny More	9.99	6.99

PLEASE STATE MAKE OF COMPUTER

Amstrad CPC Cassettes

	R.R.P	OUR PRICE
Out of this World	9.99	6.99
Pack of Aces	9.99	6.99
Peter Beardsley	8.99	6.29
Pike and Pile	9.99	7.99
Pirates	20.99	17.69
Pit Fighter	10.99	8.79
Phantom Club	8.99	6.29
Power Up	15.99	12.79
Power Plays	9.99	6.99
Predator 2	11.99	9.59
Prince of Persia	10.99	8.79
Puzznic	10.99	8.79
RBI 2	10.99	8.79
Rick Dangerous 2	10.99	8.79
Robozone	10.99	8.79
Rebel Planet	8.99	6.29
Red Scorpion	9.99	6.99
Rescue on Fractalus	9.99	6.99
Revolacion	9.99	6.59
Rod Pike Horror Compilation	9.99	6.99
Roland Ahoy	9.99	6.59
Roland in the Caves	9.99	6.99
Roland on the Ropes	9.99	6.99
Sabre Wolf	9.99	6.99
Saracen	9.99	6.99
Second City	8.99	6.29
Sepulcri	8.99	6.29
Shadow Fire	8.99	6.29
Slap Fight	8.99	6.29
Space Hawks	8.99	6.29
Shadow Dancer	11.99	9.59
Shoe People	10.99	8.79
Silent Service	10.99	8.79
Sim City	13.99	11.19
Simpsons	10.99	8.79
Six Appeal	15.99	12.79
Skull & Crossbones	10.99	8.79
Smash TV	10.99	8.79
Snoopy	9.99	7.99
Soccer Compilation	12.99	10.39
Soccer Mania	14.99	11.99
Sonic Boom	9.99	7.99
Space Crusade	10.99	8.79
Super Heroes	14.99	11.99
Super Monaco G.P	11.99	9.59
Super Sega	17.99	14.39
Super Sim Pack	16.99	13.59
Super Space Invaders	10.99	8.79
Supercars	10.99	6.79
Switchblade	10.99	8.79
Swiv	11.99	9.59
System 3 Pack	15.99	12.79
Terminator 2	10.99	8.79
The Biz	14.99	11.99
Thunderjaws	10.99	8.79
Tie Break	9.99	7.99
Time Machine	9.99	7.99
Tolkien Trilogy	13.99	11.19
Toyota Celica Rally	11.99	9.59
Turtles 2	11.99	9.59
Tusker	9.99	7.99
UN Squadron	10.99	8.79
Ultimate Collection	15.99	12.79
Virtual Worlds	14.99	11.99
Viz	10.99	8.79
We are the Champions	9.99	7.99
Welltris	10.99	8.79
World Class Rugby	10.99	8.79
WWF Wrestlemania	10.99	8.79
Questor	8.99	6.29

Amstrad CPC Educational Software

		R.R.P	OUR PRICE
Answer Back Junior	Disc	14.99	13.49
Better Maths age 12-16	Cass	11.99	10.79
	Disc	17.99	16.19
Better Spelling age 9-14	Cass	11.99	10.79
	Disc	17.99	16.19
Donald Alphabet Chase	Cass	10.99	9.89
French Mistress	Disc	20.99	18.89
Fun School 2 age 6-8	Cass	10.99	9.89
	Disc	13.99	12.59
Fun School 2 age 8+	Cass	10.99	9.89
	Disc	13.99	12.59
Fun School 2 age under 6	Cass	10.99	9.89
	Disc	13.99	12.59
Fun School 3 age 5 7	Cass	12.99	11.69
	Disc	16.99	15.29
Fun School 3 age 7+	Cass	12.99	11.69
	Disc	16.99	15.29
Fun School 3 age under 5	Cass	12.99	11.69
	Disc	16.99	15.29
Fun School 4 age 5 7	Cass	12.99	11.69
	Disc	16.99	15.29
Fun School 4 age 7+	Cass	12.99	11.59
	Disc	16.99	15.39
Fun School 4 age under 5	Cass	12.99	11.59
	Disc	16.99	15.29
Physics Revision	Disc	19.99	17.99
The Spanish Tutor	Disc	20.99	18.39
Magic Maths age 4-8	Cass	11.99	10.79
	Disc	17.99	16.19
Maths Mania age 8-12	Cass	11.99	10.79
	Disc	17.99	16.19
Xanagrams	Disc	14.99	13.49

PLEASE STATE MAKE OF COMPUTER

NEWS FLASH we now stock Mega Drive-Master System-Gameboy-Game Gear Games & Peripherals

RAINBOW ISLANDS

Over the next few months we'll be giving the solution to Rainbow Islands, Ocean's brill conversion of the Taito coin-op. This month, we look at the first 4 islands.....



ISLAND 1 / FINAL LEVEL

The scenario consists of you on one of seven vertical islands. Your little character has to get to the top before the tide comes in. Contact with vegetables gets him points, contact with the wildlife gets him killed. They may be trying to tell us a moral here, but there are other more frivolous things that they aren't saying.

Collecting a red star, for instance, kills all the baddies on the screen; it inexplicably turns them all into fish, which then mutate into vegetables. Be a good lad and eat them while they're fresh though, as they disappear after a few seconds.

Yellow stars give your character a double-length rainbow; not only useful for crossing big gaps with, but it takes out a hell of a lot of beasties with one go. Get more stars, and he fires triple-length rainbows.

Another way to hit beasties, and one that's not mentioned on the cassette sleeve, is to run into them after you've just been reincarnated. You'll flash for the first ten seconds or so: during that time you are "it." Revenge time.

Having turned something into a fish by walking into it, or whacking it with a rainbow, the chances are that it'll turn into a gem. These are megapoints, so grab them before they vanish!

Other good things to hit with rainbows on the first island, Insect Island, are the pumpkins. These are where the killer bees come from. Don't stomp on them, because it's odds on that a bee will come out just as you're going in.

If you're a bit sluggish with your gameplay, the water level starts to rise up the screen (Global warming? What global warming?) which you must avoid at all costs. Your little character doesn't like baths, and drowns on total immersion.

But with luck, you'll make it to the top before the water does, where you will be showered in fresh fish and vegetables as a reward. I wonder what these Japanese types do to reward failure?

[1] INSECT ISLAND

The first three levels of Insect Island are easy; just the thing for warming up your joystick on. You need to do these on your own or you won't have the basic skills to go further. Learn to be generous with the rainbows. Build bridges with them, shoot bees out of the air with them. You won't run out, and you might even hit a hidden prize while you're at it.

When entering the fourth level, wait for the second beetle to drop down before you fire your rainbows (which you'll probably be firing three at a time by now). This stops the second one dropping in on you unexpectedly as you climb.

Right at the top of level 4 there are very narrow stepping stones, and very many vindictive beetles. Start going up on the left (don't go into the cave on the left- dead end), and dodge the beetles as they fall. Then make a bee line for the top. Jump into the dark ceiling and you meet - The Spider.

This spider is big, extremely



rainbow resistant, and very bouncy. The idea is to splat rainbows above him and jump on them. The debris reduces his energy, as seen as a collection of red smarties in the background. If anyone finds an easier way to defeat him, let me know 'cos it's hard work.

[2] COMBAT ISLAND

The major difference with this island is the large gap. This occurs in a few places, and requires you to build bridges and ladders from your rainbows. Avoid trying to turn round on top of a rainbow; you slide back the way you came, shattering the rainbow below you, and falling down. So, aim for the upper level at a diagonal.

Right at the start of Combat Island, you will be charged by two trucks. The second truck is really a pair, so stay alert. Remember the green cross code: Look left, look right, and zap them with a rainbow as they hit the ground! Don't miss them or they'll get you a couple of levels up.

A bit further up are two patrolling tanks. Jump up a little bit so that the top of your rainbow just clips them. With one gone, the other can be killed off with a direct frontal assault without being shot at too much.

The rest is just a climb past a fleet of helicopters, which you can jump up at to shoot with the rainbows. Triple-shooter rainbows are essential here, but just past this is the top.

Combat Island level 2 is pretty much the same as the first, in fact, I found it a bit easier. A longer bridge-building session is required, however, near the end. If you still have triple-barrelled rainbows, you can manoeuvre while building bridges, otherwise, remember that you're climbing at a diagonal.

Level three is much more interesting. As soon as you leave the first part of the screen there are two of the bomb-chucking crocodiles. Jump up between the two, blast sideways, and then land on the cleared platform. Then turn, and wipe out the other croc.

Above this is an aeroplane with rainbow-busting bombs. Throw a rainbow on the left-hand croc's platform, climb it, and jump onto the small platform above you when the plane is flying away. Blast it when it turns round, taking a few bonus stars with it.

After a little more mundane scenery, you come to a tower with rather a lot of air and not much in the way of platforms in it. Bridge-building all the way to the top now, I'm afraid; about two screenfuls of it. Just when the "Hurry up" message appears too. Don't go up the edges of the screen, or the two aeroplanes half way up can blow your rainbow clean off. The thing is, punk, do you feel lucky today?

When you reach the top of the tower, don't jump too enthusiastically, or an aeroplane up there decapitates you. Also be wary of the pillbox on the penultimate platform: it does blend in rather well with the background. Still, bash it with a rainbow, jump, shoot the plane, climb a rainbow, jump. There you are, covered in fresh vegetables.

Level four is a meanie. Two army trucks are headed straight for you at the start. No sooner have you made it up one screen, when a couple of helicopters descend on you - and not a platform in sight to stand on.

Past these, there is a tank and sentry on patrol. These waste valuable time in waiting for them to get out of your way, and you can't do a little jump to just clip the bottom of them with a rainbow, or you'll collapse your bridge. Just be patient, though by now you'll probably notice that the tide is starting to come in.

Just a little further, and you'll pass the two pill-boxes. This will bring you into contact with the monster mutant helicopter. This is large, green, and like the spider; mean. You kill it in a slightly different way, firing rainbows into it rather than dropping rainbow fragments on it. It isn't as fast as the spider, and it doesn't home in on you, but it does drop bombs on you and your carefully laid rainbow bridges.

A good ploy is to follow it round, blasting it's tail, and jumping out the way onto the platform at each end of the screen. You can also leap up into the air, and pick it off in its own element if you're daring enough.

[3] MONSTER ISLAND

Visually it's a bit different to the last two islands, most strikingly in the colour of the background: various shades of black. While the same rules apply as for the other levels, there are definitely more nasties and they move in mysterious ways.

At the start of the first round on this island, three Cyclopes march downwards. Just back off a bit, and pile in the rainbows until you've hit all three. Then clear up all the mangoes that they turn into, and hop up a couple of platforms (the one with the book on is loaded with invisible fruit) to meet your friends, the bats. Bats home in on you with bursts of frenzied activity every three seconds or so. Try to get on one side of a barrier to them, and shoot rainbows through the barrier. Easier said than done, though. You may find it easier to jump up in front of them and fire wildly to turn them into fruit. Fruit-bats? Never mind.

One of the bats yields a bottle of go-faster juice when shot, so do get him. After which, you approach the







ISLAND 3 / FINAL LEVEL

owls. I'm not sure if they are ghoulies or owls, but it's less painful to be caught by the owls, so owls they are.

Three owls here, but keep your eye out for a Cyclopes who drops in later. They are all wandering around a star. Hit that and they'll all die. So build a rainbow bridge directly underneath, stand to one side while the owls cluster above you, jump up to grab or shoot the star when they aren't suspecting it.

The Cyclopes will probably wander off the edge in the meantime, but you're not just doing this for a hoot; two of the owls turn into crystals for you.

After that, there is a tricky bit with few platforms that requires rainbow bridge-building techniques. Where are all the owls?

Forget the platforms. Start in the middle, building up and to the left. Two bats flit in from the right, so you should manage to either perforate them with rainbows or drop a rainbow bridge on them.

Now belt over to the middle as soon as you can, to avoid being dropped on by a another Cyclopes who falls to the left or right. All that stands between you and the end of the round is a couple of bats in the belfry.

The next round has some of those spiteful sprites that shoot bits at you, as encountered in Combat Island but with a suitably horrific appearance. So, warned you are. Grab your joystick firmly by the neck, and off we go.

Three bats simultaneously dive-bomb you right at the start. There is little cover and rainbow bridges need to be built to get anywhere. Climb up the middle, so giving you plenty of time to shoot the bats to the left and right as they bump into the platforms scattered about. When you've got the bats, wing it over to one side. The highest bat, you see, turns into a vampire. The Count is firing a striking line in thunderbolts, so wait until he's fired and stake him with a rainbow while he's reloading.

Be wary about popping your head up into the next screenful too quickly though, or it might get frazzled by a couple of fire-breathing Cyclopes. Get these, as they turn into crystals, shooting the fireballs if you are feeling particularly flash. There is plenty of time to rush up between bouts of flame, as long as you blast the damned bat first. Mind you, if you get all the bats, one of them gives a kill-everything star, which wipes out all the monsters in the screen. One in the eye for Cyclopes!

Above this: another pair of Cyclopes, kept company by Count Thunderbolt. Pick off the lowest Cyclopes, go up above the fireballs from the other Cyclopes and shoot Dracula. Then build a bridge over the remaining Cyclopes, and drop it on him.

The next Cyclopes pair require nothing more than good timing. Firing three rainbows at a go, you can take out both Cyclopes and a fireball in one without getting flame-grilled. Rainbows will take out fireballs, and can be used to block them - once.

For the next Cyclopes-bat trio, do not belt over to the gap on the left-hand side and try to get the star, as the bat is just above you when the screen scrolls up.

A little higher up are more Cyclopes, two draculas and an owl. By standing on a rainbow, you can fire another into a Cyclopes. Then hop into the top left corner, turn, and hit the bats. Then up onto the next bit of platform. Two more Cyclopes and a pair of bats to go, then your accolade of fresh fruit. A suitable gift in Japan, I'm told.

But now, the next round has you outside the castle. Shame, 'cos you want to be inside. Up you go then, but hit the Cyclopes above you first.

A little further up are a couple of Cyclopes with a gap in the middle. Go to the far left and jump up onto the platform above, facing right as you leap. Then, build a rainbow bridge, stand on the top of it, and blast rainbows at them. These should just clip the Cyclopes feet, but do it quickly before your bridge disintegrates and the vampire bats above descend upon you.

Pause not, for there are a couple of vampires and Cyclopes, requiring lots of rainbows but yielding many crystals. Be careful that you don't get stuck against the left-hand side as the vampires descend, or it's "so long, sucker."

Two easily despatched fire-breathing Cyclopes later, all hell breaks loose: four vampires descend at once. Don't think of it as being outnumbered, think of it as having a wide choice of targets.

The best bet seems to be to attack from the centre, blast the bats on the left, and jump over there before the ones on the right can react. Eliminate those by sheer fire-power.

The screen now has three channels on it. Go up the centre column, but go up firing 'cos there are bats in this belfry too. Fireballs are


LEVEL 3

LEVEL 4

also flying about, but going to the left or right is difficult due to a couple of Cyclopes. Jump up very quickly, and they won't have had time to fire. One of the bats contains a kill-all star, so keep firing!

In complete contrast, there is a lot of empty space next, with just a couple of vampire bats to keep you company. As it is impossible to jump between platforms, and you will be bridge-building, zap the bats before they turn into Draculas and start chucking thunderbolts through your bridges. Those rainbows don't seem to last like they used to...

Still, at the top of this chilly waste is the top of this section, and no, you can't jump to safety from the highest platform. It's a long way down if you fall...



And so we move to round 12, welcomed by more moving beasties than I've seen on a screen yet. So that's where all the owls got to! Blast the lot, there's plenty of room, and hop up onto the top left platform, which avoids the first couple of vampires on the next screenful.

Don't get too cocky: there's more of them. The next two are a royal pain unless you hit the fire-breathing Cyclopes on the left first.

Three more reside above, but no Cyclopes to keep them company this time, just a daft owl.

On the left-hand platform above, there are a couple of owls guarded by a bat. Knock bat for six, and approach owls from the right. The dopey birds won't home in on you very quickly then.

Above them are three wandering Cyclopes. Wait for two of them to drop down to you, preferably to one side, and blast them before bouncing up to shoot the last one.

Finally, there is an assortment of bats and owls waiting for you before a series of platforms. Wipe out the lot before jumping up the platforms to meet the next level: The Count himself.

The swine throws bats at you! Bats dropping on you from all over the place. I said dropping, not droppings. Who do you think Iam? David Attenborough? Unlike Mr Attenborough, the Count doesn't move around much, so try to get just level with his head, and pump in rainbows until the blood-red droplets behind all disappear. Then, with about half a million points, you win an all expenses paid trip to Toy Island. Don't ya love it?

[4] TOY ISLAND

The scenery is wonderful - wish you were here. Nice, bright colours; sweets, ice-creams and bananas for goodies; pretty butterflies flitting past. Blast! Must remember: don't touch the butterflies. Closer inspection in pause mode reveals that they are really rotating clowns, but they had me fooled!

ISLAND [4]

LEVEL 1

The first screenful then, has two bouncing pop-up critters and a couple of spinning clowns. Blast the hoppers, and watch one of them mutate into an extra rainbow star. Stand on the rainbows to remove the revolving clown, and then claim the extra star if you need it.

Meanwhile, the other clown has revolved to the top right. Start bridging the gap to the next platforms, and take out Coco as he comes towards you. You can always drop lots of rainbows on him if he gets stuck.

There is quite a gap after this, with little movement in it. Go up the middle, because there will be a hopper on your left, and a clown to the right. Hit the clown first by bouncing up and down as you shoot manically. The hopper takes longer to home in and can be left for afters.

Two more clowns reside above; one trapped to the left, the other ranging in the empty area to the top right. Shoot the one on the left while the one on the right homes in on you. Then blast right.

Three well-spaced platforms lie above you. Amongst them lie two frisbees. These just track back and forth. The only problem you'll have with them is not banging your head as you jump up the platforms. Avoid this by building rainbow bridges instead, or just clipping them with the top of a rainbow barrage.

The multi-coloured platform above is smothered with hidden goodies including a red star, so plaster it with rainbows before moving on up to the pair of ferocious frisbees.

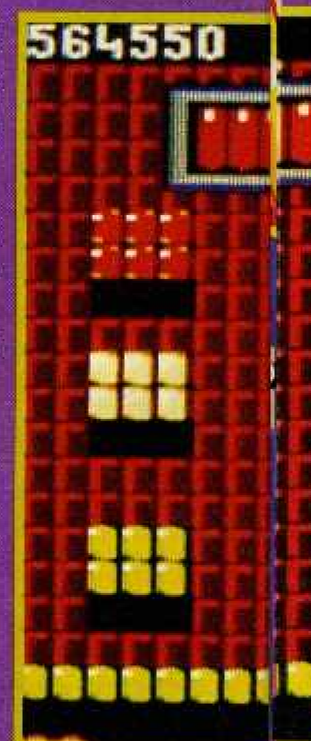
The right-hand frisbee can be hit by jumping up from the central platform and hitting it while airborne. Wait until the left-hand frisbee starts heading left before jumping onto the next platform and blasting it.

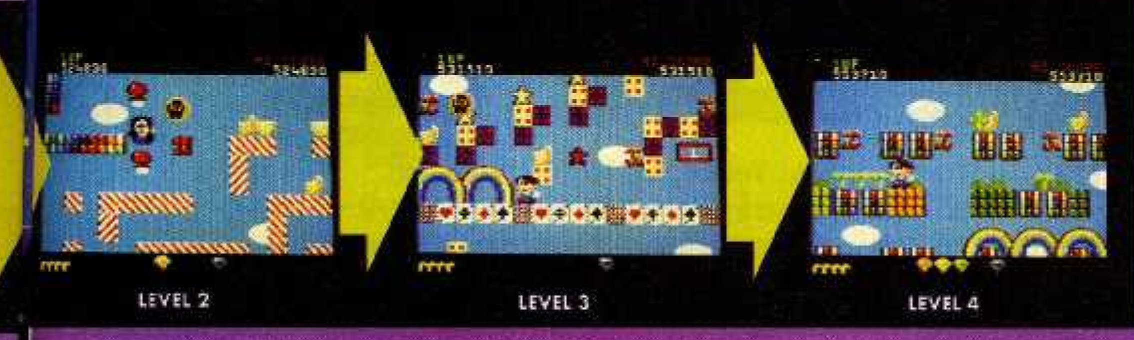
Platforms begin to get thin on the ground now. Despatch the two circulating clowns before building bridges up to the two frisbees, just clipping them with your rainbows. As you pass the discs and approach the very sparse platforms, beware! Two clowns hurtle around all over the place and are a pain in the neck unless you get rid of them first. You have plenty of time if the water isn't rising as this is the last part of round lucky 13.

Round 14 starts off in a candy-striped world. More colourful, but with shooting beasties again; this time it's water pistols. Also, we have smarties with owls on. What do these Japanese guys have about owls?

Jumping up on the first screen is a bad idea, unless you like being decapitated by frisbees. Fire right to take out the hoppers, climb on the rainbows to get the owl, and then shoot out the discs to the left.

Above this is your first water pistol. Put a rainbow off the left edge of the platform, stand on it, and blast the pistol from there. Now you can take





care of the owl that is spinning towards you. Soldiering on, you'll find two water pistols. These fire infrequently, so wait until they fire before you jump up and blast them mid-jump.

Taking out the pair of owl disks is the next task. Just jump up and wait for them to come to you.

Time to build bridges again as the ratio of fresh air to platform increases. Unfortunately, three owls circulate unpredictably in the space, so climb up to the four spinning discs quickly. Wait until they're all in the centre, and then build a rainbow bridge through the lot of them.

Only two hoppers and a brace of water pistols between you and freedom now; they're easy targets if you've got the time left for them. I was usually half-drowned by this point, with no time left for casual carnage, so the hoppers have to go. Approach from the right if possible.

So then, to round 15, filled with stars and playing cards and curious grabbing pincer devices. Fortunately, the grabs can be shot up and are wiped out by red kill-all stars.

So, the first thing to do is get the red star. Then, get the yellow stars before going up at your leisure.

As you head into the mass of water pistols and pincers above, land facing right just below the left-hand grab on the far left of the platform there. Fire, and you'll wipe out the grab. Now you can just hop up, and drop rainbows on everything below.

There follows a screen of utter calm, the point in the movies where someone says "I don't like it, Carruthers; it's too quiet. They must be plotting something."

They are. The way ahead is stopped by a road-block of claws. Either build a bridge up to just underneath them and nip them out from below, or build up to the platform between them and take them out from there.

The next part is impossible without triple rainbows. You have two screenfuls of air to cross, and absolutely no platforms. So, fire rainbows right, move right. Fire rainbows left, move left. Repeat until you've obliterated the four owls by pure chance, and incidentally reached terra firma again.

To greet you are a couple of grabs and water pistols. Jump up inside the columns of bricks opposite the grabs and fire sideways to kill the grabs, then jump to where the grabs were to get the water pistols. With me? Good, because by now, two spinning owls will have joined in, or will be real soon.

The next bit is almost exactly the same, and has the same solution. But when solved, you're on round sweet 16.

The two hoppers on the right have to go first. Easy meat. Then rush over to the far left to give yourself room to take out Mr. Clown. Now build a bridge to just under the right water pistol and clip him with a rainbow. As you do this, another clown is likely to appear on the left. Blast him before tackling the other water pistol by direct attack. The grabs have acres of room between them, so jump up and fire rainbows across the top of them. Much safer.

The patrolling water pistol above is much trickier. Build a bridge, wait for him to go past, and jump up to shoot him in the back. Don't wait too long, or your bridge disappears. Beware also the strolling, rolling clown in that area. Get him before going for the second water pistol.

Wait until it fires, and jump up on the platform it just shot over. Despatch at your leisure.

From there, jump up between the row of grabs, picking up bonuses as you go. Hop up on the left side, where you'll find a star that wipes out most of the nasties on the screen. A little further up, just past the hopper, are a couple of water pistols. As usual, build a bridge to stand on, and take out the left-hand one. The right-hand owl contains a kill-all star, but you don't need it by the time you get there.

Onwards and upwards is a water pistol with a couple of grabs underneath. Stand on the platform to the left of the grabs to blast it, then jump up and fire rainbows at the water pistol. Now look sharp for two clowns coming for you like Exocet missiles. The best bet is to lure them into your mass of rainbows that you used to hit the water pistol, and collapse the lot on clown and partner.

Now hop up the platforms quickly - nothing will stop you - until you come to the apex. There, bridge off to the right, wait for the pistol to fire, take out the nearest grab with the water pistol. Check for hoppers before jumping up.

Make your way up and to the left, taking out that hopper on the way. Go up until you find the next collection of grabs, and don't come up in the middle of them; come up by the bananas. The top isn't far away now, but look out for a couple of clowns.

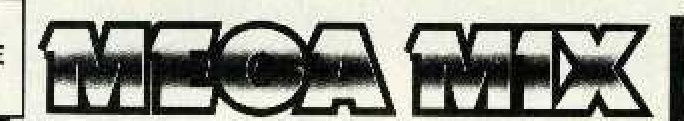
Now the Grand Finale screen. This being the last round on Toy Island, there's a big, bouncing clown to eliminate. He leaves a trail of little jokers behind him as he goes, so you have to dodge them too. Concentrate on avoiding him, and treat your hits as happy coincidences.



ISLAND 4 / FINAL LEVEL

NEXT MONTH **The Final Islands**

ACCESS/VISA
24HR MEGALINE
0732 351220



ALL SOFTWARE
SENT BY FIRST
CLASS POST



(Dept. ATTK) 46 Ashden Walk, Tonbridge, Kent TN10 3RL

SEGA MASTER SYSTEM
MASTER SYSTEM NOW ONLY
£54.95
ALL MASTER SYSTEM GAMES
FROM £9.95 TO £29.95
(LISTS ON REQUEST)

SECOND HAND
GAMES FOR ALL FORMATS IN
STOCK FROM ONLY £7!!!

EXCHANGE SERVICE
AVERAGE EXCHANGE RATES
ARE AS FOLLOWS:
NEW FOR OLD ....£10-£15
OLD FOR OLD ....£3-£7

SEGA MEGADRIVE
SEGA MEGADRIVE £10.95
MEGADRIVE PLUS GAME
OF OUR CHOICE £119.95
MEGADRIVE PLUS ANY
GAME UP TO £35 ....£139.95
MEGADRIVE PLUS ANY
GAME UP TO £50 ....£149.95

MEGA MEGA OFFER
SEGA MEGADRIVE +2 OF THE GAMES LISTED BELOW + TURBO JOYPAD

SONIC HEDGEHOG	TCK
MICKEY MOUSE	STREETS OF RAGE
OUTRUN	FANTASIA
ALIEN STORM	ICE HOCKEY

WORTH NEARLY £280.00 NOW ONLY £169.95

EXTRA MEGADRIVE OFFERS
JAPANESE CONVERTOR	£9.95
AV LEAD	£8.95
TURBO JOYPAD	£12.95
QUICKSHOT PYTHON 3 JOYSTICK	£14.95
GIZMO JOYSTOCK	£34.95
HARD CARRY CASE	£34.95
8 BIT CONVERTOR	£24.95
SCART LEAD	£14.95

PLEASE NOTE:

ALL OUR MEGADRIVES COME WITH PSU'S AND A JOYPAD AND ARE JULLY COVERED TO RUN UK/USA AND JAPANESE SOFTWARE.
ALL MACHINES ARE GUARANTEED FOR 12 MONTHS

	UK/USA	JAP		UK/USA	JAP		UK/USA	JAP
688 SUB ATTACK	33.95	0.00	GOLDEN AXE II	34.95	32.95	RASTAN SAGA II	32.50	24.95
ABRAHAM'S BATTLE TANK	34.95	0.00	HARD DRIVIN	33.95	23.95	REVENGE OF SHINOBI	32.50	32.50
AEROBLASTERS	0.00	31.95	HELLFIRE	0.00	23.95	ROAD RASH	34.95	0.00
ALIEN STORM	32.50	28.95	ICE HOCKEY	34.50	0.00	SAINT SWORD	32.95	21.95
ALISIA DRAGOON (JAP)	34.95	0.00	JAMES POND	34.95	0.00	SHADOW BLASTER	28.95	23.95
ARROW FLASH	24.50	18.95	JAMES POND II (ROBOCOD)	34.95	0.00	SHADOW DANCER	32.50	23.95
ART ALIVE	26.95	0.00	JEWEL MASTER	0.00	32.50	SHADOW OF THE BEAST	34.95	0.00
ATOMIC ROBOKID	27.50	24.00	JOE MONTANA SPORTSTALK	34.95	0.00	SHINING IN DARKNESS	47.95	0.00
BATMAN	29.95	32.50	JOHN MADDENS 92	34.95	0.00	SONIC THE HEDGEHOG	34.95	23.95
BONANZA BROS	0.00	29.95	JOHN MADDENS FOOTBALL	32.50	0.00	SPACE INVADERS 91	27.95	0.00
BUCK ROGERS	34.95	0.00	KAGEKI	0.00	32.50	SPEEDBALL 2 (out soon)	34.95	0.00
BURNING FORCE	0.00	23.95	KID CHAMELEON	34.95	0.00	SPIDERMAN	34.95	23.95
BUSTER DOUGLAS	33.50	23.95	BULLS V LAKERS (JAP)	34.95	0.00	STARFLIGHT	37.50	0.00
CALIFORNIA GAMES	34.95	0.00	LEMMINGS (JAP)	34.95	0.00	STORMLORD	37.95	0.00
CRACKDOWN	32.50	23.95	MAGICAL HAT	0.00	23.95	STREETS OF RAGE	34.95	23.95
DECAP ATTACK	32.95	0.00	MARBLE MADNESS	34.95	0.00	STRIDER	37.95	32.50
DESERT STRIKE (out now)	34.95	0.00	MARVEL LAND	0.00	30.95	SUPER MONACO GP II (JAP)	34.95	32.95
DEVIL CRASH	0.00	32.95	MERCS	34.95	32.95	SWORD OF VERMILLION	47.95	0.00
DICK TRACY	32.50	24.95	MICKEY MOUSE	32.50	26.95	TECHNO WORLD CUP 92	0.00	32.95
DJ BOY	34.95	15.95	MIDNIGHT RESISTANCE	33.95	34.95	THE IMMORTAL	34.95	0.00
EL VIENTO	0.00	38.50	MIGHT & MAGIC	34.95	0.00	THUNDERFORCE III	29.95	21.95
E-SWAT	37.95	18.95	MOONWALKER	33.50	24.95	TOE JAM & EARL	34.95	0.00
F22 INTERCEPTOR	34.95	0.00	Ms PACMAN	32.95	0.00	TOKI	0.00	32.95
FAERY TALE	33.95	0.00	OUTRUN	0.00	32.50	TWO CRUDE DUDES (out now)	34.95	0.00
FATAL REWIND	34.95	0.00	PAPERBOY	34.95	0.00	VALIS III	37.95	21.95
GAIARES	38.50	31.80	PGA TOUR GOLF	33.50	0.00	WARDNER SPECIAL	33.95	32.50
GAIN GROUND	32.50	33.95	PHANTASY STAR II	39.95	0.00	WONDERBOY III	0.00	21.95
GHOSTBUSTERS	27.95	19.95	PHANTASY STAR III	47.95	0.00	WONDERBOY IN M LAND (JAP)	34.95	32.95
GHOULS N GHOSTS	38.50	31.95	PITFIGHTER	34.95	0.00	WORLD CUP ITALIA	26.95	21.95
GOLDEN AXE	32.50	24.95	QUACKSHOT (D. DUCK)	34.95	32.95	ZERO WING	0.00	29.95

SEGA GAMEGEAR
(UK) GAMEGEAR + COLUMNS NOW ONLY £104.75
GAMEGEAR PLUS + COLUMNS AND GAME OF YOUR CHOICE £124.95
ALL GAMEGEAR GAMES NOW FROM ONLY £22.50 EACH
(LIST ON REQUEST)

2-PLAYER LEAD	£14.95
PSU	£9.95
USA PSU	£14.95
MASTER GEAR CONVERTOR	£24.50

GAMEGEAR TV TUNER £69.95
AVAILABLE SHORTLY

NINTENDO GAMEBOY GAMES

	rrp	our
Fortress of Fear	29.95	22.95
Gauntlet II	29.95	22.95
Ghostbusters II	29.95	22.95
Go Go Tank	29.95	22.95
Golf	29.95	18.95
Gremlins 2	29.95	22.95
Hatris	29.95	22.95
Home Alone	29.95	22.95
Hudson Hawk (Feb)	29.95	23.95
In Your Face	29.95	21.95
Ishido	29.95	23.50
Jeopardy	29.95	22.95
Klax	29.95	22.95
Kung Fu Master	29.95	19.95
Marble Madness	29.95	22.95
Megaman	29.95	22.95
Megaman 2	29.95	22.95
Mercenary Force	29.95	22.95
Mickey Mouse 2	29.95	21.50
Mickey's Dang. Chase	29.95	22.95
Navy Seals	29.95	22.95
NBA Allstars	29.95	22.95
Nemesis	29.95	21.50
Nemesis II	29.95	22.95
NFL Football	29.95	18.95
Ninja Gaiden	29.95	22.95
Nobunaga's Ambition	29.95	24.95
Operation C	29.95	22.95
Pacman	29.95	21.95
Paperboy	29.95	22.95
Pipe Dream	29.95	22.95
Popeye 2	29.95	22.95
Prince of Persia	29.95	22.95
Princess of Blobette	29.95	22.95
Punisher	29.95	22.95
R-Type	29.95	22.95
Revenge of the Gator	29.95	22.95
Robocop	29.95	22.95
Robocop II	29.95	22.95
Roger Rabbit	29.95	22.95
Side Pocket	29.95	22.95
Simpsons	29.95	22.95

PLEASE CALL IF A TITLE YOU REQUIRE IS NOT LISTED

NINTENDO SUPER NES
(UK) PAL-1 VERSION
ONLY
£149.95

NEW & USED GAMES IN STOCK FOR USE ON FAMICOM & SUPER NES RANGING FROM AS LOW AS £20.00

UK CONVERTORS £29.95
USA/JAP CONVERTORS £14.95

NINTENDO GAMEBOY
(UK) VERSION
ONLY £64.95
NEW & 2ND HAND GAMES AVAILABLE

SUPER FAMICOM GAMES
For use on JAP/USA Famicoms or UK Super Nex with the use of UK convertor

	rrp	our		rrp	our
HOME ALONE (USA)	59.95	45.95	ROBOCOP III (USA)	59.95	49.95
HYPERZONE	49.95	32.95	ROCKETEER	59.95	44.95
JB KING JOYSTICK	59.95	59.95	SIM CITY	49.95	39.95
JOHN MARDEN FOOTBALL	57.95	45.95	SIM CITY (USA)	59.95	49.95
JOYPAD	19.95	13.95	SMASH TV (USA)	59.95	44.95
LAGOON (USA)	59.95	45.95	SUPER CONTRA	59.95	49.95
LEGEND OF ZELDA (USA)	59.95	44.95	SUPER FIRE PRO WRESTLING	49.95	39.95
LEMMINGS	59.95	49.95	SUPER OFF ROAD (USA)	59.95	44.95
PAPERBOY II (USA)	59.95	44.95	SUPER PINBALL (NYR)	59.95	47.95
PGA TOUR GOLF (USA)	59.95	47.95	SUPER PRO BASEBALL	49.95	37.95
PILOT WINGS	49.95	38.95	SUPER R-TYPE	59.95	34.95
PILOT WINGS (USA)	59.95	43.95	SUPER TENNIS	59.95	43.95
PIT FIGHTER (USA)	59.95	44.95	THUNDER SPIRITS	59.95	42.95
POPULOUS	49.95	39.95	TURBO RAPID FIRE UNIT	24.95	19.95
POPULOUS (USA)	59.95	43.95	ULTRAMAN	49.95	39.95
PRO SOCCER	49.95	34.95	UN SQUADRON	59.95	34.95
R-TYPE (USA)	59.95	44.95	UN SQUADRON (USA)	59.95	44.95
RAIDEN	49.95	34.95	US GAME CONVERTER	19.95	14.95
HC PRO AM (USA)	59.95	43.95	WRESTLEMANIA	59.95	47.95
RGB CABLE	29.95	24.95	XE1 SFC JOYSTICK	74.95	54.95

SAVE £5 OFF CONSOLES OR HANDHELDS (EXCLUDING CREDIT CARD ORDERS)

SAVE £1 OFF ALL SOFTWARE WITH THIS VOUCHER (EXCLUDING CREDIT CARD ORDERS)

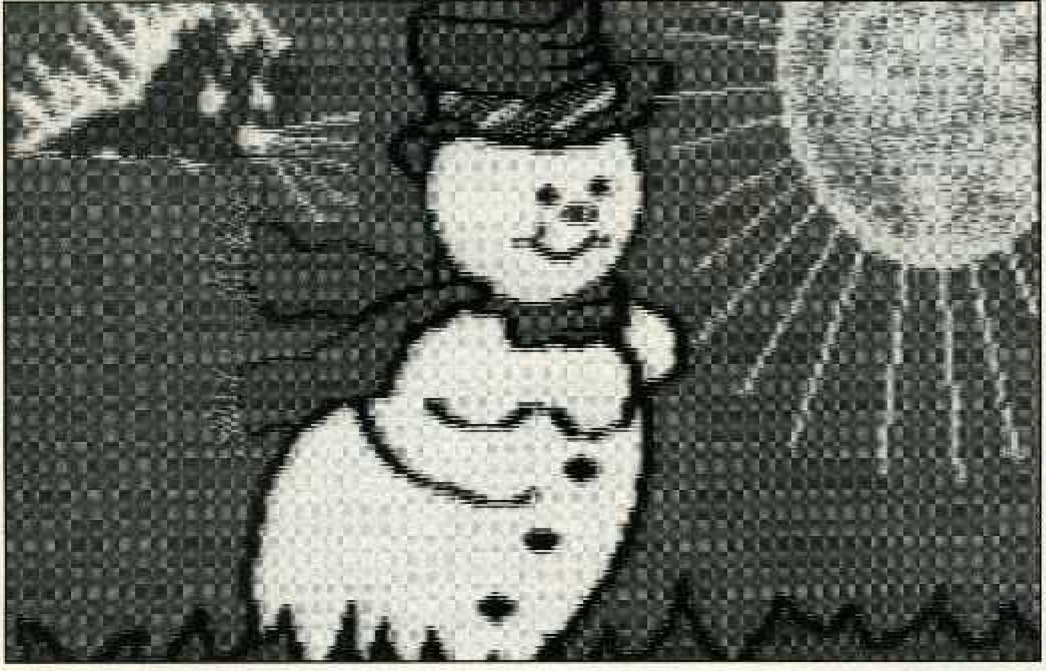
ALL THE ABOVE LISTED GAMES ARE JAPANESE UNLESS OTHERWISE MARKED

TO ORDER PLEASE STATE ITEMS YOU REQUIRE TOGETHER WITH PAYMENT, MADE PAYABLE TO "MEGAMIX" OR PLACE YOUR ORDER ON OUR CREDIT CARD HOTLINE (0732) 351220 OVERSEAS ORDERS ADD £5 TO NORMAL RATES. ORDERS FOR CONSOLES PLEASE ADD £4 OR £8 FOR NEXT DAY DELIVERY, £3 HAND HELDS, £2 FOR ACCESSORIES, £1 PER ITEM OF SOFTWARE. ALL PRICES ABOVE INCLUDE VAT, POSTAGE AND PACKAGING.

MEGAMIX SOFTWARE (ATTK) 46 ASHDEN WALK, TONBRIDGE, KENT TN10 3RL

THE DUNGEON

Welcome to our monthly look at the CPC adventure scene. This is where you'll get all the news of the latest releases, help with your queries and generally discussions on anything adventurey



The Last Snowman

REVIEWS

THE LAST SNOWMAN

WoW Software
Tape £2 Disc £4

Written by Margaret & Mike Crewdson, this adventure is aimed at filling a gap in the market that has rarely been tackled before. I'm referring to adventures for children. Many times I have been asked to recommend an adventure suitable for a child or even an easy game for an absolute beginner and it has always been a difficult question to answer. THE LAST SNOWMAN should now make my task a lot easier.

It has been programmed using the Graphic Adventure Creator (GAC) and starts off with a well-drawn and colourful loading screen plus music from Swan Lake. A further nice touch is that the game can be supplied already personalised with the child's name, so that locations and items in the game such as the bedroom become "Bob's" bedroom rather than just "your" bedroom. The game is also written in a very helpful way, spelling all the important words in the text in CAPITAL letters thereby drawing attention to them. Coupled with a nice story line. Ideal.

THE BIG TOP

WoW Software
Tape £2
Disc £4

In THE BIG TOP you have the challenge of trying to join the circus. The owner will only consider you if you complete various chores such as cleaning out the elephant cage first. This is

NEWS

Judging by the number of letters I receive on the subject, one of the biggest problems facing the new adventurer is where and how they obtain the classic adventures of yesteryear. Those nice people at WoW Software and The Guild are doing their best to obtain as many as they can for re-release to an ever increasing public but even they cannot either get or distribute them all. Very often the rights and/or ownership are tied up and no amount of persuasion can make certain games available again. So what can you do? Well, the only avenue worth pursuing is buying second-hand, but this can be risky as you are never certain that the goods will always be as described. But now Simon Avery has come up with a solution that should be the answer to everybody's prayers.

What he is proposing is to set up a database that will include a list of adventure titles that people are wishing to buy, a list of titles that people are wishing to sell, plus all the relevant names and addresses thus making the job of matching the purchaser to the seller as easy as pressing a button or two. Not only is this an excellent idea but Simon is also willing to do it free of charge! To quote his own words, "As I have been around for a while now and there is no money involved on my part, you can assure the readers that I won't scarper with any profits. I enjoy the adventure scene too much to do anything like that." Well said, Simon. Now of course, a scheme such as this will not take off unless everybody writes to Simon with the list of games they are looking for and/or have for sale. I've already sent Simon my list so if you wish to join me then you can write to Simon Avery at 71 Fore Street, Chudleigh, S. Devon TQ13 0HT but please, as there is no charge involved, do at least include a stamped self-addressed envelope.

"MY LAMP WON'T WORK" DEPARTMENT

Two helpful readers have responded to the difficulties that Mr Tattersall was having in MAGICLAND DIZZY. Take a bow, Barbara Hedges and Ian Pye. The solution to getting the fire so you can light the cauldron, is to first get past the troll. To do this you must release the goat using the dagger and the stick. The goat then butts the troll and this will allow you to cross the bridge and enter Zak's castle. Make sure you take the cross with you to keep the vampire away. Throwing water over Denzil in the ice block will gain you a personal stereo. Take the fire below the steps off the wall and this opens a cave below. Okay Mr Tattersall?

Right, on the basis of one good turn deserves another, Barbara Hedges would now like some help herself with DIZZY SPELLBOUND. She has managed to release Dylan and Grandad but can't get the honey from the bees, or past the ore crusher. Can some kind reader help, please?

THE DUNGEON

ROLE PLAYING GAMES

Are you a regular RPG'er on the CPC? If you enjoy playing the "DUNGEONS AND SUBURBS" type of adventure, then why not write in and tell of your experiences, likes and dislikes. We look forward to hearing from you.

THE SCROLL OF WISDOM

The following good people who are experienced adventure players, have kindly offered to help any readers who are having difficulty with a particular problem. Please do not ask for full solutions and treat the "Scrollers" with due respect. Either telephone ONLY during the times shown or include a stamped S.A.E. if you write to them.

Simon Avery, 71 Fore Street, Chudleigh, South Devon. TQ13 0HT. Tel: 0626 854339. Simon can offer help with not only all of his own adventures but also with: Case of the mixed up Shymer; Quest; Black Knight; Forest at World's End; Jewels of Babylon; Ghost House; Seabase Delta; Hobbit; Bogglt; Scary Tales; D.A.A; Nite Time; Black Fountain; Caves of the Bewbews; Grue-Knapped!; Helvera-Mistress of the Park; Crispin Crunchy; Souls of Darkon; Al-Strad; Escape from Planet Doom; Cave Capers; Conch; Yawn; Message from Andromeda; Quest for the Golden Egg-cup; Orifice from Outer Space; Robocide; Lighthouse Mystery; Use your loaf; Escape from Prison Planet; Heroes of Karn; Imagination; Bestiary; The Big Top; Hounds of Hell; Davy Jones Locker; Castle Warlock; Power Curse; Theseus and the Minotaur; Merlin; Cacodemon; Subsunk; Dick'ed; Bored of the Rings; Yarkon Blues; Lost Scroll; Flook; Videoworld; Antidote; Star Wreck; Castle Adventure; Detective; Atalan; Talisman of Power; Casiopia; Orbquest; Panic beneath the Sea; Inner lakes; Into the Mystic; Hermitage; City for Ransom; Tizpan; Can I Cheat Death? Dungeon; Jason and the Argonauts; Magician's Apprentice; Welladay; Total Reality Delusion; House out of Town; A Thief's Tale; Danger - Adventurer at Work; Boredom; Adult 2; Firestone; Labyrinth; Roog; Prison Blues; Spaced Out (Spacy); Rogue Midget; Doomlords; Gerbil Riot of '67.

Barbara Hedges, 5 The Hemplands, Collingham, Newark, Notts NG23 7PE can offer help on the following completed games: Dizzy One; Dizzy Treasure Island; Fantasy World; Magicland; Prince of the Yolke Folk.

The Last Snowman

another adventure aimed at youngsters and is accompanied by many graphics of clowns etc., that should keep the children amused. The presentation is not as detailed as in the game above but it still serves as a nice, gentle introduction into the art of adventuring.

I am really pleased that WoW have decided to release these two games and I'm sure that they will be of interest to a lot of people who wish to demonstrate to the young that there is more to computing than just blasting aliens.

THE TAXMAN COMETH

WoW Software
Disc £4

Written by Steve Clay, this is a humorous text adventure programmed with the Professional Adventure Writer (PAW). As with all PAW games this needs CP/M to load it and is therefore only available on disc.

You play the part of Queen Stephanie's tax collector and you have to persuade six residents of Tripe on the Wold that tax evasion is not a good and proper thing to do. However, adventures are never straightforward and the sort of complications you have to overcome include a Wizard

The Big Top

who lives in a tower that doesn't appear to have an entrance; a Giant who would prefer to eat you than pay up; Topper who is rather free and easy about using his sword; and a Dragon who is sitting on his pile of gold.

A THIEF'S TALE

WoW Software
Tape £4 Disc £6

The author is Simon Avery (whose name crops up a couple of more times in this month's article.) With Simon's adventures you know before you begin that you are going to gently have your leg pulled and this three part adventure is no exception. You play the part of Sid, a thief of some repute, leading a party of companions consisting of the beautiful Lady Gwendoline, Shortstop the dwarf, Nasna the magician, Bruce the wolfhound and Fred the young apprentice. Various other characters appear that you can talk to as well as trying to complete your quest of finding Shortstop's long lost Uncle Gordo. This text only game is written with the Quill and is available on both tape (£4) and disc (£6). All the above adventures are available from WoW Software, 78 Radipole Lane, Weymouth, Dorset DT4 9RS.

Please make P.O./Cheques payable to JG Pancott.

We are making the HELP section larger so you can write in with any problems that you may have. I can print any maps that you request and I will generally try to make your adventuring easier and more fun. Why just sit there tearing your hair out in frustration when help could be just a letter away? Also, please write in with any help, hints and tips for other readers on the adventure that you've just completed and any other adventure related news or chat that you would like to pass on.

Please send all correspondence, hints, maps, complaints, etc. to:
THE DUNGEON, CPC ATTACK!, HHL Publishing, Greater London House, Hampstead Road, London NW1 7QQ.



SUBSCRIPTION FORM

CPC0792

For ease of payment we can offer subscribers a variety of ways to pay, details of which are outlined below

NAME
Mr/Mrs/Miss/Ms.......................................
....
(delete as appropriate)
ADDRESS...
....
....
...............POSTCODE...........................

Please send me 12 issues of **CPC ATTACK**
UK residents-£22.20 for 12 mths
EUROPE Airmail-£35.20 for 12mths.
REST OF WORLD Airmail-£50.70 for 12mths.

1) I enclose a cheque (or postal order) made payable to HHL Publishing Ltd.
2) OR please debit my Access/VISA Card no.

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Expiry date...
Signature...
Date..

3) **ALTERNATIVELY** Access/VISA card holders may order their subscription by calling (091) 510 2290 during working hours. Please ask for the **CPC ATTACK** Subscription Department and have your card to hand.

4) SHOULD YOU WISH TO PAY BY DIRECT DEBIT Please complete the following details.

Your Bank ☐

Address ☐
Originator's No: 724657

a) Please write the full postal address or your bank branch in the box above.
b) Name of account holder.................
c) Account number ☐☐☐☐☐☐☐☐
Banks may refuse to accept instructions to pay debits from some types of account
d) Sort code ☐☐☐☐☐☐
e) Your instructions to the bank and signature:

- I instruct you to pay direct debits from my account at the request of Headway, Home and Law Publishing Ltd.
- The amounts are variable and may be debited on various dates.
- I understand that Headway, Home and Law Publishing Ltd may change the amounts and dates only after giving me prior notice

I will inform the bank in writing if I wish to cancel this instuction. I understand that if any direct debit is paid which breaks the terms of this instruction, the bank will make a refund.

Signature...
Date..

NEWS

Last month, news broke of the demise of DATA PD. This month, we hear it is to continue under new management and will not only be expanded but will also be available in a totally different format as well. Simon Walker has agreed to take over the running of the library from Tony Kingsmill and it will now be called the AMSTER'S CAGE DATA PD. The name AMSTER'S CAGE will ring a bell with any modem owning ex-Micronet users, as that was the name given to the CPC area. Since the death of Micronet, the AMSTER'S CAGE has moved to the new Viewdata service called THE SILICON VILLAGE, a commercial bulletin board set up to take over where Micronet left off. Simon Walker is the Editor of TSV's AMSTER'S CAGE, so as well as running the postal side of the PD library from home, he will also be making some of the library available for down-loading. If you have a modem and would like a free demonstration of what THE SILICON VILLAGE has to offer, just ring either of the telephone numbers listed at the end of this article and use the following passwords: User number 4444444444 password 4444. Simon will be producing an updated catalogue shortly but in the meantime, you can order anything in the existing DATA PD catalogue from AMSTER'S CAGE DATA PD.

Yippee! Good news for all long suffering tape-based only readers. POWER HOUSE PD has been started by C.Yates and it is TAPE ONLY. At the time of writing, the library consists of 8 programs and you can order six titles on one tape for £1 plus SAE.

Yet another PD library has started doing business this month. Ben Saunders has supplied details of his new library called SCROLL PD. Ben has sent a written list of his products but there's a bit of confusion as some of the titles appear to be commercial games. The prices are all different as well and there were no test samples. If you want more information you can drop him a blank disc and request his catalogue.



PUBLI SEC

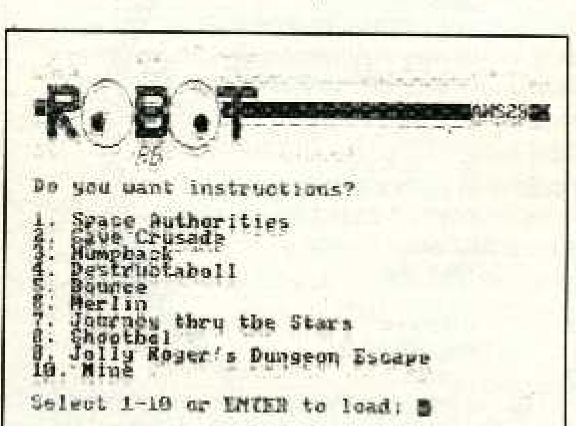
The only monthly round-up of the PD news and reviews worth reading

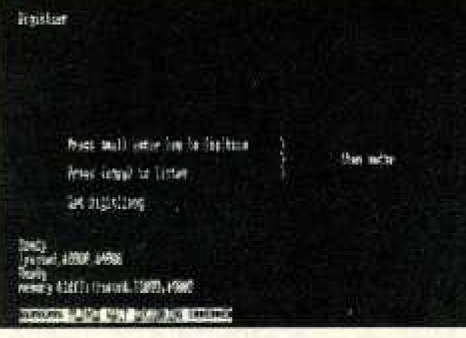
REVIEWS

AMS28 - Games 8: ROBOT PD. 45p Plus disc & SAJ.

ROBOT PD is becoming well-known not only for the large size of its library but also because a large number of the programs available are actually written by the owner himself, Richard Fairhurst. Databases, Comms utilities and even a Desk Top Publisher are just a few of the programs he has written for the CPC. When he wanted even more products for his library, he started contacting programmers in Europe. The fruits from the contacts he made are now available from **ROBOT** and consist of programs mainly from France and Germany but also contain some from Denmark and Holland and all of them are very impressive.

One of his imports lives on this disc. It is a fine example of smooth scrolling, instantly updated screen, and rock steady graphics. It is a game entitled CROCO MAGNETO. This is a game which has been put together by somebody with obvious programming skills and it just shouts "quality" at you. As Richard of ROBOT PD (and **CPC ATTACK!**) says on the loading screen "Equal in quality to many £2.99 games - yet it is PD". CROCO is based around guiding a ball through a maze and destroying bricks whilst avoiding lots of killer drums but it is a much better game than those few bland words can describe. There is a driving musical accompaniment as well. As an extra bonus, the game also comes complete with its own designer program so that you can change it all around and even design a brand new 24 level game. Brilliant.





DIGITISER - SLPD - £1.50 or Tape + 50p + SAJ

The most interesting addition to the range of Sounds Like PD's digitized sounds is a sound and music digitiser you can use yourself. It works too! I have been having lots of fun feeding sounds and music via cassette into my CPC and then listening to it play it back in digitised form. The quality is marred by the CPC's tinny speaker but I'm sure it would sound quite good through a half-decent sound system. Of course, digital sounds use a lot of memory and with the CPC's memory you can only get a sample lasting about thirteen seconds but nevertheless it is a nice fun program.

IC
TOR

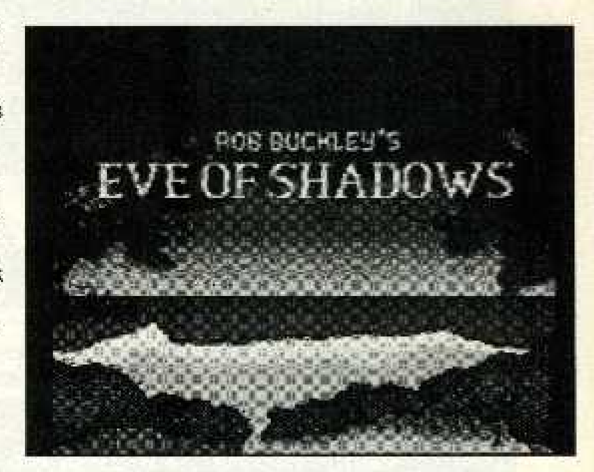
A.N. FANZINE - 90p + disc + SAJ

This is based on a 3 inch disc and is mainly devoted to the CPC. The disc loads by just typing "Run Disc" and then you are presented with a nicely drawn loading screen followed by a numbered menu. A single key press then takes you to the section you want to read. On issue 1 the sections available are:

1) Letter from the Editor; 2) Features; 3) Amstrad game reviews; 4) NES game review (Nintendo); 5) Reader section; 6) Adverts; 7) News; 8) In our view.

Select option one and the first thing that hits you is the fact that the writers are not using a text editor with word wrap. Words that are split across the end of lines are ugly and just make it difficult to read. It is also in Mode 1 whereas I would have preferred Mode 2. I tried to alter the basic loader but it is protected. I think the reader should be given the choice of screen mode. The files on the disc appear to be just ordinary Basic files and if so, it only takes a bit of care to make sure that words do not split, so there is no excuse. However, a PD text editor would make a much easier and more professional job of it.

I was going to review each section in turn but unfortunately, there wasn't really anything to comment on. The disc itself contains a nice shell of what a disc based magazine needs. All this one needs now is some text to fill it. The ideas are fine but in my opinion, the execution isn't worth the asking price of ninety pence. For 90p it is possible to get two sides of a disc crammed with first class PD programs and I know which I would rather have. If Alan & Austin would care to fill up the disc with good quality text and rely less on graphics (advertising the magazine!) then I'd be happy to give it a more favourable review. Nice try lads but it needs a bit more work.



LHZ-CPM.LZH: BBS free download

And now, a little snippet for all the Modem users who read these pages. Have you ever logged-on, dashed along to the file area, down-loaded some juicy looking files and then found to your horror that you could not use the files until they had been unpacked? Even worse, you discovered that the files had been packed with an archiver such as LZH which is not generally available on the CPC? Well fret no more, because there is a new unpacker available for all CPC & PCW owners called LHZ-CPM.LZH. That snappy title does in fact hide a very useful program for un-crunching all files that have a .LZH extent. It is very easy to use, it works and you can down-load it from PRESTON-ROS BBS, to name but one.

LIBRARIES/CONTACTS

As usual, we finish off with a list of the libraries who have sent in examples of their programs and/or a catalogue.

3D PD Library, 44 Echline Grove, South Queensferry, West Lothian EH30 9RU.

ADVENTURE PD, 10 Overton Road, Abbey Wood, London SE2 9SD.

A.N. Fanzine, 129 Moss Street, Keith, Moray AB55 3EY.

AMSTER'S CAGE DATA PD, Lightcliffe, Station Hill, Wigton, Cumbria CA7 9BW.

DARTSMA PD Library, 47 Kidd Place, Charlton, London SE7 8HF.

DEMON PD Library, 47 Hilton Avenue, Hall Green, Birmingham B28 0PE.

EGERTON PD Library, (Tape) 7 Linden Close, Stafford, Staffs ST17 9TH.

PENGUIN SOFTWARE, Ruxley House, 28 Mount Hermon Road, Woking, Surrey GU22 7UH.

POWER HOUSE PD, 5 Pentland Road, Slough, Berks SL2 1TL.

ROBOT PD Library, 2 Trent Road, Oakham, Rutland LE15 6HF.

SCROLL PD, 14 Linacre Cres, Cirencester, Glos GL7 1WB.

SOUNDS LIKE PD, 6 Keyberry Park, Decoy, Newton Abbot, South Devon TQ12 1BZ.

YORKIE PD, 11 Beechwood Avenue, St. Albans, Herts AL1 4XP.

The above librarians will be happy to send you a stock list but PLEASE include a stamped addressed envelope. For those of you with a Modem, you can try down-loading some FREE Public Domain programs from the CPC/CPM file areas on the following bulletin boards:

RED ROSE 0772 652212 (24 hours)
Scrolling SILICON VILLAGE 081 759 2348 or 0734 819000 (24 hours) Viewdata

If you are a Public Domain library or you wish to recommend one or even a particular program, then we'd be delighted to hear from you. Write to: PUBLIC SECTOR, CPC ATTACK!, HHL Publishing, Greater London House, Hampstead Road, London NW1 7QQ.

AMSTRAD GAME CARTRIDGES FOR 6128+/464+/GX4000

TITLE	BOXED WITH INSTRUCTIONS	UNBOXED NO INSTRUCTIONS
Klax	£24.99	£14.99
Pro Tennis Tour	£24.99	£14.99
Batman	£24.99	£14.99
Operation Thunderbolt	£24.99	£14.99
Barbarian II	£24.99	£14.99
Navy Seals	£24.99	£14.99
Robocop II	£24.99	£14.99
Pang	£24.99	£14.99
Switch Blade	£24.99	£14.99
No Exit	£24.99	£14.99

Special offers : 10 Unboxed games (all different) £100.00

Amstrad GX4000 Games Consoles with free game £59.99
Amstrad Paddle Controller £9.99

Amstrad MP3 Modulator/TV Tuner, for use with CTM644 monitor.....£33.99
Amstrad CPC464 cassette mechanism with tape head and motor.....£29.99
Amstrad 464 head alignment tapes.....£9.95

Prices include VAT, postage and packing

All orders by return: Cheque/Visa/Access
Trade-In-Post, Victoria Road, Shifnal, Shropshire TF11 8AF
Tel/Fax (0952) 462135



PRODUCE PICTURES LIKE THIS IN "MINUTES" USING A DMP2000/2160/3000/3160/3250 PRINTER AND THE

DART SCANNER

A remarkable new image scanning system which enables you to recreate & store pictures, documents, drawings, photographs etc.

***No camera or video source needed**
Simply feed your original into DMP2000/2160/3000/3160/3250 printer (does not affect normal printing operations).

***Compatible with STOP PRESS** and any light pen or mouse which works with standard screen format

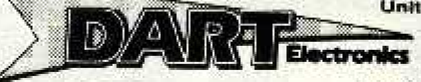
*** For all CPC computers**

Features:
Scan-Magnification x1, x2, x3, x6
Print-Full size/Half Size, Load & Save to Tape or Disc, Area Copy, Scrolling Window, Zoom Edit, Box/Blank, Clear Area, Add Text, Flip Screen, On screen Menu.

Applications:
Advertising/Artwork, Letterheads/Logo's, Newsletters & leaflets, Games Screens.

Package Comprises:
Scanner head, Interface, Software on Cassette or Disc
£69.95
Including VAT and P&P





Unit B5, Oulton Works, School Road, LOWESTOFT Suffolk NR33 9NA
Telephone: (0502) 513707
Trade and Export enquiries also welcome





WoW SOFTWARE
ADVENTURES FOR THE 464 & 6128



NEW ADVENTURES

ADVENTURE	AUTHOR	CASSETTE	DISC
SIMPLY MAGIC	M & J TREWHELLA	£2	£4
CRISPIN CRUNCHY	M & J TREWHELLA	£2	£4
TIME	M & J TREWHELLA	£2	£4
CRISPIN CRUNCHY & TIME & SIMPLY MAGIC	M & J TREWHELLA	3 GAMES ON 1 DISC	£8
ORB QUEST (Four Parts)	P & T STITT	£5	£7
YARKON BLUES	JASON DAVIS	£2	£4
YARKON BLUES II (Two Parts)	JASON DAVIS	£3	£5
THE SMIRKING HORROR	JASON DAVIS	£2	£4
YARKON BLUES I & II & SMIRKING HORROR	JASON DAVIS	3 GAMES ON 1 DISC	£7
THE TALISMAN OF POWER	CHRIS BURY	£2	£4
POWER CURSE (Two Parts)	ADRIAN CONN	£3	£5
ESCAPE FROM PRISON PLANET (Two Parts)	PETER CLARK	DISC ONLY	£5
HOUNDS OF HELL (Two Parts)	PETER CLARK	DISC ONLY	£6
(Both Above Games - 464 or 6128 or PCW)	PETER CLARK	2 GAMES ON 1 DISC	£7
THE ANGELICUS SAGA (Two Parts)	M & MJ CREWDSON	£3	£5
THE ANGELICUS ANSWER	M & MJ CREWDSON	£2	£4
THE ANGELICUS SAGA & ANGELICUS ANSWER	M & MJ CREWDSON	2 GAMES ON 1 DISC	£8
HELVERA - MISTRESS OF THE PARK	BOB ADAMS	£2	£4
GRUE-KNAPPED	BOB ADAMS	£2	£4
HELVERA & GRUE-KNAPPED	BOB ADAMS	2 GAMES ON 1 DISC	£5
MAGICIAN'S APPRENTICE	SIMON AVERY	£2	£4
PRISON BLUES	SIMON AVERY	£2	£4
TOTAL REALITY DELUSION	SIMON AVERY	£2	£4
DANGER! ADVENTURER AT WORK!	SIMON AVERY	£2	£4
DANGER! ADVENTURER AT WORK TWO	SIMON AVERY	£2	£4
GERBIL RIOT OF '67	SIMON AVERY	£2	£4
CHOOSE ONE OF THE ABOVE SIMON AVERY GAMES ON DISC AT £4 AND ADD ONE OR MORE GAMES AT £1 EACH	FOR EXAMPLE -	5 GAMES ON 1 DISC	£9
A THIEF'S TALE (Three Parts)	SIMON AVERY	£4	£6
A THIEF'S TALE & ANY 3 SIMON AVERY GAMES		4 GAMES ON 1 DISC	£9
ADVENTURES OF ZEBEDEE GONIC (Disc Version "Save to Tape" Only)	DARREN THOMAS	£2	£4
MERLIN (Two Parts)	MICHAEL HUNT	£3	£5
BEYOND THE DARK MIRROR	RCD ENTERPRISES	£2	£4
THE TAXMAN COMETH (464 or 6128 or PCW)	STEVE CLAY	DISC ONLY	£4
NEW GAMES FOR CHILDREN			
THE LAST SNOWMAN (PERSONALISED)	M & MJ CREWDSON	£2	£4
THE BIG TOP	RONNIE SLATER	£2	£4
RE-RELEASED ADVENTURES			
CRYSTAL THEFT	PAUL WILSON	£1.50	£3.50
THE TRIAL OF ARNOLD BLACKWOOD	COLIN HARRIS	£2	
ARNOLD GOES TO SOMEWHERE ELSE	COLIN HARRIS	£2	
THE WISE AND FOOL OF ARNOLD BLACKWOOD	COLIN HARRIS	£2	
ANGELIQUE A GRIEF ENCOUNTER	COLIN HARRIS	£2	
BRAWN FREE	COLIN HARRIS	£2	
		5 GAMES ON 1 DISC	£8
THE CASE OF THE MIXED-UP SHYMER	SANDRA SHARKEY	£2	£4
LOST PHIRIOUS PART 1 - THE CASIOPIA	NEIL SCRIMGEOUR	£1.50	
LOST PHIRIOUS PART 2 - THE PLANETS	NEIL SCRIMGEOUR	£1.50	
LOST PHIRIOUS PART 3 - FALKRHANON	NEIL SCRIMGEOUR	£1.50	
		3 GAMES ON 1 DISC	£3.50
BLACK KNIGHT (Two Parts)	MANDY RODRIGUES	£3	£5
ATALAN	MANDY RODRIGUES	£2	£4
BLACK KNIGHT & ATALAN	MANDY RODRIGUES	2 GAMES ON 1 DISC	£6
PROJECT X - MICROMAN	TIM KEMPJON LEMMON	£2	£4
CITY FOR RANSOM	JOHN PACKHAM	£2	£4
PANIC BENEATH THE SEA (Two Parts)	JOHN PACKHAM	£3	£5
PROJECT ANNIHILATION	JOHN PACKHAM	£2	£4
CITY FOR RANSOM & PANIC BENEATH THE SEA	JOHN PACKHAM	2 GAMES ON 1 DISC	£6
RANSOM & PANIC & PROJECT ANNIHILATION	JOHN PACKHAM	3 GAMES ON 1 DISC	£7
FLOOK (Two Parts)	DAVID DYA	£3	£5
COLDITZ ESCAPE (Two Parts)	FRANK FRIDD	£3	£5
VIDEOWORLD (Two Parts) (*Save to Tape Only)	GRAHAM PARRY	£3	£5

ALL PRICES ARE INCLUSIVE OF FIRST CLASS POSTAGE WITHIN THE UK.
PLEASE ADD £1 TO COVER ADDITIONAL POSTAGE FOR OVERSEAS MAIL

CROSSED CHEQUES/POSTAL ORDERS PAYABLE TO: JG PANCOTT
Address: 78 RADIPOLE LANE, WEYMOUTH, DORSET DT4 9RS
Telephone: 0305 784155 1pm to 10pm

We've had loads of questions about this great device, so we thought we'd give it a test



MULTIFACE 2

This is a little box with two buttons containing some RAM, ROM and a lot of controversy. There is no hiding from the fact that you can use it to rip off software. The same can also be said of a cassette player, which is more effective at copying multi-loading tape games. No, the best features of the Multiface are the way it puts your legitimate tapes onto disc, and the way you can save a game at any point, again to disc if you want.

We've plugged the things into all sorts of Amstrads from 464s to 6128+s, even a 664, and they all work. A game saved on one sort of machine won't load on a different one, but that is just tough on software pirates.

This is how it works: Plug the Multiface in the back of your CPC. Play some game and press the red button. The screen goes into 40 column mode in an awful red, blue and yellow colour scheme, and sprouts a help line at the bottom. At this point, type 'S' for save and a filename; say, FRED. Type 'D' or 'T' for disc or tape, and it saves the whole of memory to tape. Not just that, but it saves off the state of the sound chip and video chip too, so you won't miss anything; even if it is a game that uses all the memory on a 6128. To reload, just type RUN"FRED. That's it. So simple you don't need to read the instruction sheet. The instructions show you how to do more fancy things, like pokes or reloading saved screens, and are accurate. The reloading program printed there should have the words WHILE INKEY$="":WEND in it though.

The only real problem I found with it was when plugging it into the 464 for the very first time. The 464 had 8 years' worth of grot on the edge connector. The problem disappeared with said grot when it was wiped off using a cottonwool bud and some meths. One feature used a lot is the ability to poke new features into games, such as infinite lives, or extra weaponry. Your favourite magazine (that's us) will publish pokes for Multiface users, so watch this space and send in any that you find.

INSIDER

The Insider is a hacker's Z80 tool-kit that lives inside the 8K of RAM on a Multiface. The idea is that you run a victim program, and when you want to peek inside it, you call up the Insider.

Loading it is easy, but the instructions must be followed to the letter. Calling up the Insider before loading a game saved by a Multiface causes an ignominious lock-up, so read the leaflet.

You load Insider with RUN"I", then run your game or whatever as normal. To use Insider, hit the red button and the program proper is loaded off the disc by the stub program hiding in your Multiface. So you must have the Insider disc in drive A: all the time. Tricky if you're looking at something that accesses the disc a lot; dangerous if it is writing.

What you see on the screen is disappointingly small: everything is done in a window about ten lines high and sixty characters wide with mode 2 characters. Apart from being illegible on a TV adaptor, it gives the distinct impression that you are hacking through a letter-box.

But once in the letter-box, you can examine all memory, ROM or RAM, in hexadecimal, decimal or as text. Searching can also be done by number or string, and can start from any location in memory. Disassembly is done using the more understandable Zilog mnemonics, with some ad-lib extensions for the undocumented instructions that the more devious programmers use.

All your results are displayed in the letter-box either screen at a time (page mode) or as continuously scrolling text, which you can pause with the space bar. Curiously, the line that you ask to see first is always scrolled off the top of the letter-box, so disassemble or dump a little way before what you really want to look at.

When you're done, you can return to program to see what happens to the modified code. Sadly, you can't use the original Multiface functions to load and save any more; you have to remember what you poked, and enter it again with the standard Multiface software.

If you just want to look at code, the Insider is fine. It is not a debugger, however, and will not let you trace through code or even save chunks of memory to disc for further modification and reloading. Though it is possible to use Insider to find infinite life pokes etc., the inability to trace through the code as it executes makes this difficult.

It is not possible to modify register values and invoke a sub-routine to find out what it does. About the only thing you can sensibly do is hand code (no built-in assembler) a series of instructions at the program counter (no way to change registers) and let it go. A routine to initialise the disc pack and save out the memory is about 50 bytes long. This has to be punched in by hand every time, as the Insider can't save or retrieve using the disc.

But if you're a dedicated hacker, it really is the only tool other than an expensive emulator that will let you stop any program in its tracks and fiddle with its insides.

MULTIFACE: £34.95
INSIDER: £7.95
CONTACT:
ROMANTIC ROBOT,
081-200 8870

MACHINE CODE TUTORIAL

IT'S DEMO

27 Colours on screen in any mode - explained by Ch

The flashiest effect in demos is probably a raster, which consists of a few lines of colour moving up and down across a screen - often graduated to give a smooth effect. What makes them special is that you're not restricted by the number of colours usually available in the mode you're using. So, for example, if your demo is in MODE 2, there's no reason why you can't have a raster with all 27 colours in it!

The first task is to deal with the theory. The picture on your monitor is drawn by a tiny electron beam, moving from the top of the screen to the bottom, drawing each line from left to right. A complete picture, or "frame", is drawn in one fiftieth of a second (50Hz). Using a short piece of coding, you can tell the computer to wait until the electron beam is flying back from the bottom of the screen to the top start position (known as the frame flyback or vertical blank). Then, with a precisely timed delay loop, you can make the computer wait until the electron beam is at any point on the screen - you can then change the screen colours instantly. Another short delay will wait until the start of the next pixel line, where you can change the colours again, and so on. Doing this a few times will give the desired effect of a different colour on each line.



There are a few programming points to note. Getting the correct delay so that the raster is displayed at the right point on the screen is largely a matter of trial and error. It helps if you have a ROM-based assembler, or Multiface with the Toolkit feature!) Another is that interrupts must be OFF, otherwise a whacking great big interrupt will come charging along and mess up your precise timing. Unfortunately, this means that you have to write your own keyboard and sound routines, but we'll come to that later in the series. After each frame flyback, we must also clear the "raster 52 divider" - a technical bit which you needn't worry too much about, just so long as you put the appropriate two lines of code in your program!

To change a colour quickly (using the Video Gate Array chip), you need to do two things. First of all, send the ink number you want to change (0 to 15, or 16 for the border) to the chip - port &7Fxx (the last byte doesn't matter). Then send the colour number - not the 0 to 26 that we all know and love - but a different set of numbers which is listed in the table.

We're going to move a small raster up and down the screen. To do this, the program will need to change the delay before it displays the raster. A longer delay means the raster is lower down the screen, a shorter delay means it's higher. Each screen-line is displayed in 64 microseconds, and our delay routine takes 8 microseconds for each part of the delay. If HL contained 100, the delay would wait 800 microseconds - it doesn't take a mathematical genius to work out that to move the raster one line down means adding 8 to the delay (i.e. 8*8=64). The direction is held in a variable at "direct", and the



TIME!

ChaRleyTronic of Conspiracy

delay at "wait". When the delay reaches certain points, the direction will be reversed.

With some help of the last column, you can now start to create some worthwhile demos. Next month we'll see how to write scrolling messages that can move in any shape across the screen - across a diagonal, perhaps, or in a sine wave shape?

Meanwhile, if there's anything you'd like explaining, write to:

CRTC's DEMO TIME,
CPC ATTACK!
HHL Publishing,
Greater London House,
London NW1 7QQ
or fax 071-387 9518

THE CODE

```
        org 8000

        di              ;turn interrupts off
framef: ld b,&F5        ;select port &F500
ffloop: in a,(c)        ;get a value from it
        rra             ;are we at frame flyback?
        jr nc,ffloop    ;if not, then try again!

;get here every frame flyback

        ld bc,&7F9D
        out (c),c       ;clear the raster 52 divider

        ld hl,(wait)    ;find out how long we have to wait
        call delay      ;call the delay subroutine

        ld ix,ctable    ;the location of the colour table
        ld e,9          ;the raster is 8 lines high plus
                        ;one more line to change back to
                        ;the original background again
        ld bc,&7F00     ;&7F00 is the port address to change
                        ;colours. C, as 0, is also the ink
                        ;number for the background
        ld d,16         ;16 id the ink number for the border

rloop   ld a,(ix)       ;get the colour into A
        out (c),d       ;send 16, to select the colour
        out (c),a       ;and send the colour
        out (c),c       ;send 0, to select the background
        out (c),a       ;and send the colour again!
        inc ix          ;move the colour pointer on one
        defs 36         ;36 NOP instructions for a short delay
        dec e           ;decrease the line count
        jr nz,rloop     ;if not finished, loop back

        ld hl,(wait)    ;get the delay loop value
        ld de,(direct)  ;and what is to be added to it
        add hl,de       ;add them together
        ld (wait),hl    ;and store the value for next time
        ld a,h          ;A=high byte of the delay
        cp 1            ;is it 1 (i.e. delay>&200)?
        jr z,change     ;if so change direction
        cp 5            ;or is it 5 (i.e. delay>&400)?
        jr z,change     ;if so change direction
        jr framef       ;else jump back to frame flyback

change: ld a,d          ;this little routine will change
        cpl             ;a direction of +8 into -8, and
        ld d,a          ;vice-versa, and is used to change
        ld a,e          ;the direction of the raster from
        neg             ;up to down - and back again -
        ld e,a          ;when the raster has reached the edge
        ld (direct),de  ;edge of its limits!
        jr framef       ;back to frame flyback

delay:  dec hl          ;the delay routine - it counts down HL
        nop             ;until it reaches zero, in which case
        ld a,h          ;H and L (and hence A) will contain 0,
        or l            ;causing the routine to return. The
        jr nz,delay     ;extra NOP is for fine tuning the
        ret             ;timing (each delay is 8 microseconds)

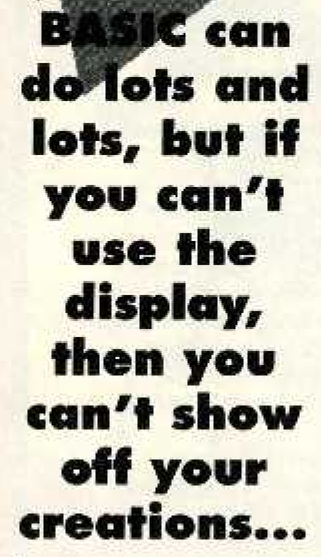
wait:   defw 200        ;the initial delay value
direct: defw 8          ;the direction of movement

ctable: defb &44,&55,&57,&53,&53,&57,&55,&44,&55 ;colour values
```

Attack! TUTORIAL

ELEMENTARY BASIC

Part 2



BASIC can do lots and lots, but if you can't use the display, then you can't show off your creations...

A computer program may calculate, search, sort and almost seem to achieve the impossible but the first impression you get of a program is the "look". This "look" is created by displaying information on the screen with a creative, logical layout. The keyword used to place information on the screen is the word PRINT.



PRINT

Basic was invented in 1964 and the only means of displaying information was to print to paper. When the technology made it possible to display information on a screen the information was re-directed to the monitor, therefore the keyword PRINT means, print characters on the monitor. Enter (Type in the word and press Return or Enter) the keyword

print

All this achieves is that the cursor moves down a line, in fact it takes the information placed after the keyword (in this case nothing) and places it on the screen. After the information has been placed on the screen the cursor is placed at the beginning of the next line down. Now place a number after the print statement. Enter

print 100

The number is printed on the line below. Let's do some maths. Enter

print 100+40+50

Answer 190 placed on the next line down. Try your own sums - the symbols are (+ add, - minus, / divide and * times, NOTE the "*" is used for times not the letter x). If you get the wrong answer don't worry - it is probably the way the computer works out maths, this will be explained later. Now, how do we display a letter: Enter

print A

Answer 0! The computer has taken the letter A as representing a number. This is called a numeric variable. The variable A has not been given a value and therefore 0 has been printed. The computer requires more information to inform the Basic language that you wish the A to be treated as a letter or character and this is achieved by using inverted commas "at the start and end." Enter

print "A"

Now A is printed. Whenever you want characters displayed on the screen you must place an inverted comma at the beginning and end of the characters. Enter

print "CPC Attack"

Try displaying your name on screen. We can now display numbers, results of sums and characters on the screen but every time we place the information the cursor moves down a line, this is known as a line feed. To stop the line feed we use a semi-colon. Enter

print "The cursor stays on this line";

We also use the semi-colon to add several statements on one line. The example line below mixes characters, the result of a sum and then more characters. Enter

print "The area of a 10 metre square is ";10*10;" metres squared"

```
The area of a 10  metre square is 100
 metres squared
Ready
```

The program's output

STRINGS

The statement "The area of a 10 metre square is " in the above example is known as a String (String of characters). All strings within the listing must start and end with inverted commas (""). The statement " metres squared" is also a string, so in the example we have displayed

a String followed by a calculation followed by another string. Some strings can be fixed (that is typed directly into the listing) but we also need a way to allow a string to be changed. This is achieved by giving the string a name this is then called a String Variable because it can change.

STRING VARIABLES

The names chosen for string variables are very important as they can describe the purpose of the string, this helps tremendously when reading through a long program. You can use Basic keywords as string variables but this is not advisable as problems may occur. So let's name our two strings. The first string "The area of a 10 metre square is" describes the calculation so I will call it "calculation". All string variables have a dollar sign behind 'S' so our string variable is now 'calculation$'. The second string describes the type of units of the calculation and therefore I will call the string 'unit$'. Note, whenever you see a string variable think of the dollar sign as the word string. Our two examples are, calculationS (calculation string) and unit$ (Unit string).

Assigning String Variables

Once we have chosen a name for a string variable, we can make it equal to a string of characters by a statement. Enter

calculation$="The area of a 10 metre square is"

The characters between inverted commas are placed in memory and will stay there until you switch off or change calculation$. The computer works like a filing system: the characters between the inverted commas are stored in a pigeon hole (memory) and that pigeon hole is given the name of the string variable 'calculation$'. We can display information stored in the pigeon hole (memory) by placing the name of the string variable behind the print statement. Enter

print calculation$

We will now set up 'unit$' to equal the second string. Enter

unitS=" metres squared"

Now let us re-write the initial display string. Enter

print calculation$;10*10;unit$

We get the same result but have now a system where we can change the string variables. So what about 10 * 10 - these are numbers being mathematically calculated and we can represent the numbers as variables.

```
10 CLS
20 side=10
30 square=side*side
40 area$="The area of a"
50 unit$=" metre square is"
60 unit2$=" metres squared"
70 PRINT area$;side;unit$;square;uni
Ready
```

The condensed listing

NUMERIC VARIABLES

As with strings, numbers can be represented by a variable. We have already used a numeric variable when we said 'print A'. The name of the numeric variable was A and as with strings careful choice of variable names can help the readability of long programs. So any word typed into a program during the writing of the program is either a Variable or a Keyword. I am now going to choose a variable name for the length of side 10, an obvious word would be 'length' and this would be accepted, but this contains the Basic keyword LEN and may cause problems so I have chosen the word 'side' instead.

CODING

So, with all this new information we will write a program to calculate the area of any square. We will have to change the two original strings to three strings because 'calculationS' has the value 10 for the length of side and we need that to be variable. So I have called the new strings (area$, unit$, unit2S). Enter

10 rem The area of any square
20 cls:rem Clear the Screen
30 side=10:REM The numeric variable 'side' is set to 10
40 square=side*side:REM Make the new variable square equal to the quantity of side times side i.e.100
50 area$="The area of a ":REM First String
60 unit$=" metre square is ":REM Second String
70 unit2S=" metres squared":REM Third String
80 rem Display the result
90 print area$; side; unit$; square; unit2S:REM Display all five variables
100 END

Save the program to Disc or Tape by entering

save "square"

Now run the program

Enter

run

You can now alter line 30 to make the variable 'side' equal to any amount and re-run the program for the result.

EDITING

If an error occurs in the program when 'Run', the line which the computer thinks is the faulty line is displayed with the cursor on the first character. The line is in editing mode, you can move the cursor using the right or left arrow key to the error and correct it. When you have corrected the line you press the (Return/Enter) key. There is no need to move the cursor to the end of the line before pressing (Return or Enter). This system of editing can be used when writing the code by entering

edit 100

This would place you in the editing mode on line 100. You can change the line number when editing, producing a copy of the line at a new position.

This editing facility is available when you are typing in the code, you can move around the line being typed by using the arrow keys and correcting any mistakes.

COPYING

Another method of editing is by copying a line. The CPC allows you to copy any information on the screen and build up new lines using parts of existing lines or text. The usual practice is to list the line which requires editing, then hold down the shift key and move the cursor to the beginning of the line using the arrow keys. Two cursors are formed, release the arrow key and shift key when you are in the correct position and press the Copy key. The line the split cursor is on will be copied to the original cursor position. When copying lines you can at any time press shift and an arrow key and move to some other position to copy more on-screen information.

KEYWORDS THIS MONTH

PRINT Display on screen any information which is placed after the Print statement

; Suppress the line feed keeping the cursor on the same line. PRINT "; Stops the line feed "; ; Also used to link statements together PRINT first$;second$;one;two

VARIABLES

Numeric Letters and words used to represent changeable numbers, i.e. number C score size

String Words ending with a dollar sign (string) signify a single or group of characters, i.e. name$ surname$ city$ street$



NEXT MONTH Getting and Positioning Information and Colour



ADVANCED BASIC



We take a peek at Program Development, and offer some guidance in this necessary area

When developing a large computer program a considerable time will be spent planning off the machine, the subject for this month. Over the short history of the computer the most successful computer programs have been those which are flexible, that is programs which can be used for a large number of tasks, i.e. Word Processors, Spreadsheets and Databases. This flexibility is written into the program in the development stage. A flexible program is one which, given a little thought at the programming stage, can cater for an almost infinite number of variations as opposed to a similar program which is fixed for only one purpose.

```
430 IF sc=pr THEN PRINT "printer";ELSE P
RINT "screen "; [F7]
440 PRINT "are on.":END [3E]
450 ' [AE]
460 DATA e5f5c5d5fe0d203a,15 [C5]
470 DATA 218aac5faf47577e,210 [D2]
480 DATA fe30382efe3a302a,80 [07]
490 DATA 7ef600202ebb2028,243 [75]
500 DATA 3e20f73e5bf77a07,173 [FB]
510 DATA 070707e60ff630fe,28 [31]
520 DATA 3a3802c607f77a1c,39 [49]
530 DATA cb4320ef3e5df73e,61 [E3]
540 DATA 12f7d1c1f1e1f7c9,8 [CC]
550 DATA 2b3e27bb2004fe20,046 [1E]
560 DATA 282004fe27f52007,100 [E4]
570 DATA 3e20bb200daf5ff6,135 [DC]
580 DATA 20f5afbb2003f1af,117 [E8]
590 DATA f5f15f0e007a9357,39 [04]
600 DATA 0c79b820f8f12002,232 [CD]
610 DATA 1e00231890000000,253 [51]
620 ' [AA]
630 ' poke himem+7,&20 = on [AC].
```

Whazzat!

e.g. 1. This next program is a fixed program with one purpose: to find the total of an investment over 20 years.

10 REM Compound Interest over 20 years

20 REM Monthly savings 20 pound - Interest 1.2% per month - calculated monthly

30 FOR year=1 TO 20:REM 20 years

40 FOR month=1 TO 12:REM months

50 lumpsum=lumpsum+20:REM New monthly total

60 lumpsum=lumpsum*1.012:REM Add interest

70 NEXT month

80 PRINT "For year ";year;" The total would be";ROUND(lumpsum,2):REM Round to 2 decimal places

90 NEXT year 100 END

If a little thought had been given to this program as it was developed, it could have calculated the total for any amount of years with any given interest percentage and monthly amount as below.

10 REM Compound Interest

20 INPUT "How many years ";period

30 INPUT "At a monthly interest of ";percent:REM Monthly compound interest would be less than 1% on most investments and more usually interest is calculated yearly

40 INPUT "With a Monthly Investment of ";invest

50 FOR year=1 TO period:REM Any amount of years

60 FOR month=1 TO 12

70 lumpsum=lumpsum+invest:REM Add the investment per month

80 lumpsum=lumpsum*((percent/100)+1):REM Add interest

90 NEXT month

100 PRINT "For year ";year;" The total would be";ROUND(lumpsum,2)

110 NEXT year

120 END

Program Development Stages

1. Initial Program Idea
2. Designing the Program
3. Writing the Code
4. Compiling the Code
5. Testing and De-Bugging
6. Documentation
7. Maintenance of the Program

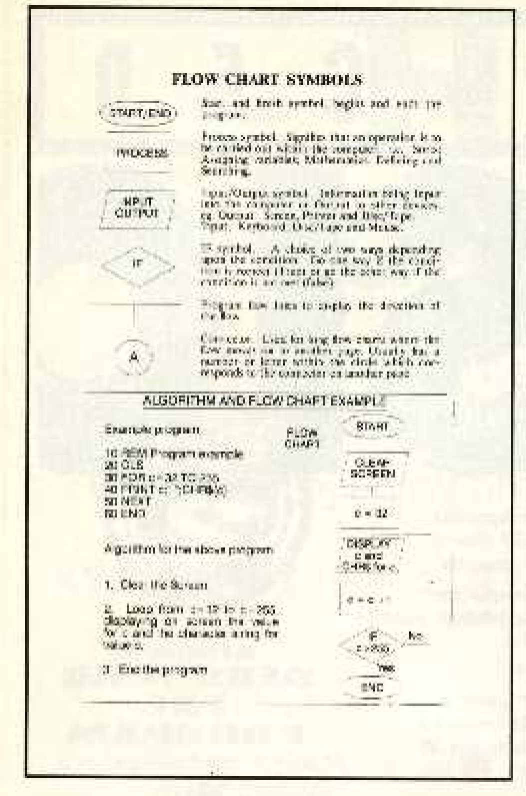
Stage 1 INITIAL PROGRAM IDEA

The most important part of any program development is the original idea and the analysis of this idea to ensure computerisation is possible. Once you have an idea you must ask yourself several questions. Can the computer achieve the solution to a problem more effectively than the original method? Would it be possible to solve using a computer? Will there be a need for the program when finished? If you are about to embark on developing a large program which will take months to complete, you must ensure the idea is sound in the first place. Of course if you devise a truly original idea, for instance a new game, take it to a software house - you can get royalties for the concept.

Stage 2 DESIGNING THE PROGRAM

When you have decided on a particular program and ascertained that computerisation is possible, you need to design the program. All new programs have sections where you can use previous sub-routines like last month's input routine and most new programs have





sections that can need a great deal of research and experimentation. The list below shows some of the main topics that may need developing before the program is written.

ALGORITHM or FLOW CHART

You need to write down the logical steps which need to be carried out to achieve the task. Imagine how you would like the program to look and what features are required and then write these down in logical steps. This helps tremendously when writing the code as you already have an idea how you would like the program to look and a logical approach. Most programmers write an algorithm - a list of steps to be taken. This is fine provided the programmer works alone. If you are working within a team of programmers then you will probably produce a flow chart (a standard graphical algorithm) so that each member of the team can understand the overall picture. (For examples see the diagrams Flow Chart Symbols and Algorithms and Flow Charts).

SCREEN DESIGN

Design the screens which you will need within your program on paper - this can save a lot of time when writing the code as you will have the layout and the screen co-ordinates. It is a good idea to develop some blank screen layout sheets with the text and graphic co-ordinates marked on them.

RE-DEFINE

Devise and calculate new characters or shapes.

EXPERIMENT

Work on sub-routines for the difficult areas of the program or on sections of the program which are new to you. Most new programs have sections where you will have little knowledge of how to write the code. Work on these sections to prove you can solve the problems. If these problems cannot be solved there is little point continuing and alternatives will need to be studied.

MACHINE CODE

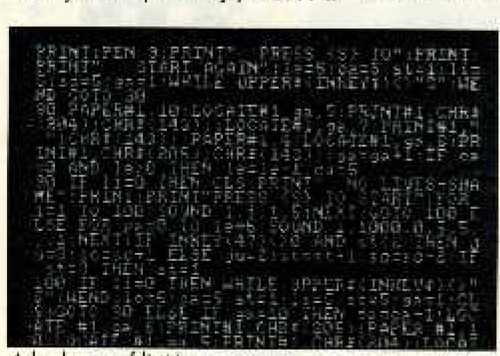
Are there functions required by the program idea which are not available in the high level language chosen or where speed of execution is essential? These may need to be written in machine code.

SEARCH

Look for sub-routines which you already have and merge them into the new program if applicable. (Do not re-invent the wheel).

UTILITIES

Can use be made of a utility program which could be bought, reducing the programming time? Some parts of programs are either difficult to produce or covered by copyright and in a number of cases these can be bought, e.g. If you are writing a desk top publishing program the standard fonts (character shapes) are all copyright and it may be easier to buy than to invent your own.



A bad case of listititus

Stage 3 CODING

Type in the program listing in the chosen language. As you will have done most of the work before typing in the code, this part of the program development will be a lot easier.

Stage 4 COMPILING THE CODE

With most languages other than Basic you will need to Compile (Change the program listing into machine code). Basic is an interpreter that compiles small sections of the program in turn, carries out the function in machine code and then reads the next small section. This system of interpreting is ideal for developing the program but can be a little slow when being "run". You can buy Basic compilers for the CPC which will convert the code to machine code giving the advantage of additional speed. Once compiled the user cannot look at your listing, however, they do have restrictions and reduce your programming space.

Stage 5 TESTING and DE-BUGGING

When the coding is complete the program needs to be tested. A large program will always have errors in it and at this stage in the development you have to try and find these errors. It is usual to devise test data which when entered will test all the sections of your program and you need to keep a log of the results. The worst errors to catch are those which only transpire after the program has been running for a long time and it is essential that the coding is correct in the first place, e.g. This program will fail after a certain amount of time and is a common fault with programmers. Try to avoid the keyword GOTO and always use RETURN from sub-routines.

10 REM
Example of a time bomb error. The program will fail after a short while.
20 GOSUB 1000:REM
Call a sub-routine
30 END
1000 REM
Count how many times this sub-routine is used
1010 count=count+1:REM counter
1020 PRINT count
1030 GOTO 10:REM
Here the programmer has used GOTO instead of RETURN and causes a 'MEMORY FULL in 1010' error message.
1040 REM
In a large program this sub-routine may only be called spasmodically and the program may run for hours before the fatal crash.

Stage 6 DOCUMENTATION

A description of the program and instructions for the full facilities within the program are required to enable others to use the software.

Stage 7 MAINTENANCE

When the program is complete and in use there are often new ideas that can be added to the program, errors may become apparent after use and therefore need correcting. With most business programs more time is spent in this area (updating, adding and correcting) than in the whole of the original program development.

That's all there is to it! So come on, start writing that mega program.



NEXT MONTH A Text Window Sub-Routine and a Flexible Menu System

CLASSIFIED

FOR SALE

COMPLETE WORK/PLAY STATION - AMIGA A1000 with 512k, colour monitor, 2nd disk drive, mouse, joystick, and lots of original productivity and games software - Quickwrite (Word processor), Deluxe Paint 3 (graphics), Superbase (Database), K-Spread (Spreadsheet), Devpac 2 (assembler) Audiomaster 3 (music), Scala 500 (video presentation), Lemmings, Populous, Monkey Island, Sim City, Xenon 2, Ninja Collection, Magic Pockets, Captive, F16 Combat Pilot, Barbarian II, Robin Hood and lots more - Over £2000 worth! Can be expanded as easily as A500 with A590 hard disk drive and memory expansion. For quick sale, first £300 secures. Guaranteed to work! Also Atari STFM 512k with 4 games - £100ono. Call Pat 071-289 5129 anytime.

CPC464 with monitor, disk drive, printer, speech synthesiser, mouse, light pen, modulator and software. All excellent condition with boxes plus dust covers and extras - value £700+. Will sell all for £500 ono (postage included Will sell separately. Contact: S.Williams, 42 Beaufort Terrace, Ebbw Vale, Gwent NP3 5NW.

CPC6128, Colour & Mono monitors, 3.5in. second drive, Rombox, Protext, Prospell, Utopia & KDS ROMDOS ROMs, Multiface, Joystick, Tape Player, MP3-TV Tuner, Loads of Software & Books. £325 - Call: (05088) 546 (NORFOLK)

AMSTRAD 464 PLUS, with monitor, games, magazines, etc. Only six months old. Worth £500, will sell for £180ono, or swap for Amiga. Tel: Ciaran on 0504 266789.

CPC6128 with Colour Monitor, Joystick and Mini Office II. Fully boxed. Excellent condition - £180ono. Tel: Justin on 0686 626101 (evenings only).

AMSTRAD 6128 without Monitor but with Multiface 2 + Insider, Stop Press, Mouse Protext, Mini Office, 27 Games, Discs (50+ Games), 30+ Tapes, Light Pen £200.00. Call Tim, 0494 483886.

CPC 6218, CTM644, Colour Monitor, Art Studio, Mouse, Blank Discs, £150 worth of Games, altogether worth £650. Sell for £450. Excellent condition Ring (0474) 323951 and ask for Akash after 7.00pm.

Brand New Amstrad CPC 464 (colour) with Dust Covers, Anti-Glare Screen, 20 Games, 2 Joysticks, 3 Computer Cassette Tapes, Demonstration Tape, Handbook. £450 o.n.o. Tel: 071 790 6472

BARGAIN! Amstrad CPC6128 for sale including Rombox, with Protext and 8-Bit Printer software on ROM. Also, Rom-Hower, input output interface and over £1000 of tape/disc software. Phone Chris 0240 72767.

Amstrad CPC6128, Colour Monitor/TV, Joystick, Mouse, 25 Games, incl. Art Studio, Turtles, Funschools 1-3 worth £900. Accept £350 ono. Also Star LC200 Colour Printer unused/boxed cost £250. Accept £150. Tel: 0906 617494

Amstrad CPC6128 with Colour Monitor, Joystick and Word Processing Software. Other games included, Robocop, Shadow Dancer, Shadow Warriors. £225. Phone 081 776 0736.

WANTED

WANTED information on interfacing Manta Printer with 6128. Connector Cable is Dual Pin (Printer) to single (computer) (both stereo audio). Anyone have connection details or driver programme? Tel: 051 334 8930

WANTED Dart Scanner, Microstuffer (Frontier Software). Eprom Programmer, KDS 8-Bit Printer Port, DMP 2000 Buffer Upgrade Kit and Character Designer (Goldmark Systems). (P&P on me). Write to George, 56 Drew Street, Yarraville, Vic 3013, Australia.

WANTED 256K memory, 256K silicon disc, Real Time Clock (from DK'tronics) for CPC 6128. Write to George, 56 Drew Street, Yarraville, Vic 3013, Australia.

WANTED CPC 6128 or 6128 +, prefer Colour Monitor, Glasgow, South West Scotland Area. Tel: 0369 83 325

SWAPS

Will swap Man United and Man United Europe for Final Fight or Kick Off 2, or Lotus Esprit or F16 Combat Pilot. Phone 0524 844748, after 5pm

Will swap Bart Simpson VS Space Mutants for Bepron. Must be on Tape. Phone Michael on 0389 32875 or send a SAE to Michael Craig, 612 Muir Road, Dumbarton, Scotland G82 3DJ.

SERVICES

Tuck PD - For a stock-list simply send a SAE to Tuck PD, 15 Ravencar Road, Eckington, Sheffield, S31 9GS. Also Perpals wanted at the same address.

USER CLUB/ FANZINES

AOK FANZINE for all CPC users. Many programming articles, PD pages, listings, advice, features, and more. £1 bi-monthly. Cheques payable to AOK. 155 HASLUCKS GREEN ROAD, SHIRLEY, SOLIHULL, WEST MIDLANDS B90 2LG.

DISCOVER THE GUIDE TO SIMPLE COMPUTER MAINTENANCE AND REPAIR



FREE

Your computer is a valuable home and business tool, you rely on your computer for speed, efficiency and entertainment.

This handy size 58 page book - Simple Computer Maintenence and Repair will offer you, the knowledge and confidence needed to diagnose problems, and perform your own repairs.

All we ask is that you simply pay £2.00 postage and packing and it's yours **– Entirely Free**

This offer is available while stocks last, so hurry and post the coupon – **Today.**

CPC ATTACK BOOK OFFER
GREATER LONDON HOUSE,
HAMPSTEAD ROAD, LONDON NW1 7QQ

▸ CPC ATTACK BOOK OFFER ◂

DEPT ME., Greater London House, Hampstead Road London NW1 7QQ

Please send me the **FREE** book, Simple Computer Maintenance and Repair

Name ______________________________

Address ______________________________

____

______________ Post Code ______________

I have enclosed my cheque/postal order for £2.00 postage and packing only made payable to **HHL Publishing.**

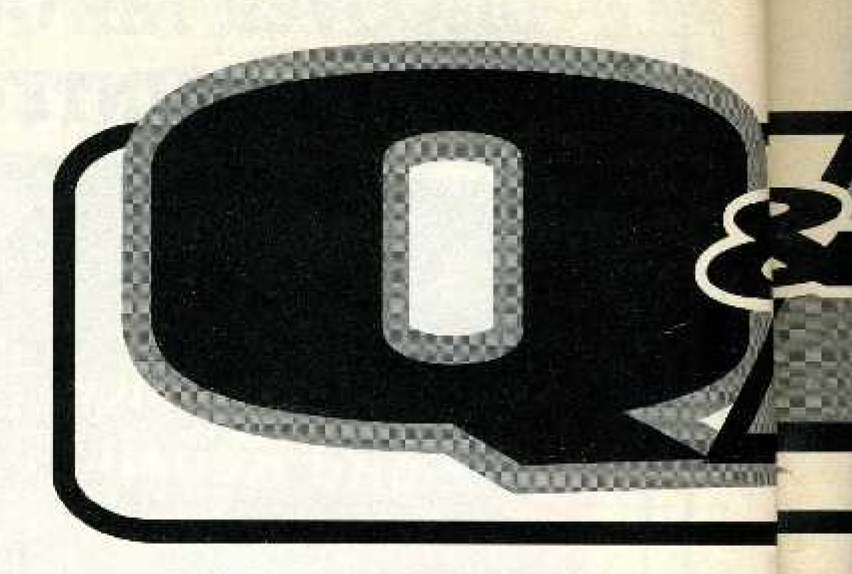
Please allow 28 days for delivery from receipt of order.

NEED HELP?

As we said before, most questions we get may appear to be easy peasy, but we can deal with hard ones too! (Ooh, er misses) If you need any type of technical advice then get scribbling. The address is:

Q&A, CPC Attack, HHL Publishing, Floor 3, Greater London House, Hampstead Road, London NW1 7QQ. or FAX: 071-387 9518

Please DO NOT PHONE as we are busy bunnies





CPC trouble? Arnold to the rescue. Trouble is his middle name, (not zit-face as previously thought)

Q I have a 464 with 64k memory expansion and a Genius mouse with Dk'tronics mouse interface. About two or three months ago things started to go wrong with my machine.

First of all, the sound disappeared and now I have no sound except for the odd noise when I am playing a game. The only way that I can get a sound is to press the cursor down key when I am typing a line of BASIC in; this makes a noise like the DEL & CLR keys used to make. Secondly, my mouse has stopped working and when I plug into the joystick port I get this on the screen:

78[]^-@po90oi
followed by a stream of arrows all pointing in the same direction.

Finally, here is my last problem, at least I think it is because I haven't found any more yet. When using the Mini Office II word processor and I press a few keys at once, I get @olurte and the screen goes back to the main menu. I also get this when I press both the down and left cursor keys simultaneously.

Please can you help as I would like my computer to work properly and most of all I would like to have my sound back.

Scott Adler, Leeds

A Well Scott, your machine certainly does sound (no pun intended) rather under the weather, but the good news is that all your problems stem from the same fault. This may be somewhat surprising as the keyboard and sound appear to be two quite separate things. In fact both are handled by a single computer chip, the AY-3-8912, which generates three channels of sound in addition to scanning the keyboard and joystick port. I believe it is this component that has failed in your machine. Replacing it is relatively simple and should cost around £15-£20.

The way in which CPCs handle the joystick port is slightly unconventional and this does, unfortunately, lead to stories such as yours. One common problem with joysticks not specifically designed for our machines is that they supply +5v on a pin that shouldn't have any voltage applied to it. As soon as you start experiencing problems, unplug the joystick to see if this is the cause. Prolonged use will invariably result in permanent damage of the kind you have already described. Contact your local computer dealer to see if they can arrange the replacement of the chip in your 464.

Q I do quite a lot of work with mentally handicapped and physically disabled people and am interested in the role computers can play in these people's lives. My own CPC 464 has given me enormous pleasure and I would like to be able to use this excellent little machine in conjunction with some simple BASIC programs that I have written myself. Although the screen is an excellent way for the computer to communicate to all humans, the keyboard is much too intimidating for disabled people so I would be grateful for your, or another reader's, help in developing an alternative form of input. Ideally this would consist of two switches and a mouth operated switch, all of which I have, but I am unable to read from within my own programs. Do I need to remove the keyboard and if so how easy is this to do? Any help would be very much appreciated as I do not know of anyone else to contact.

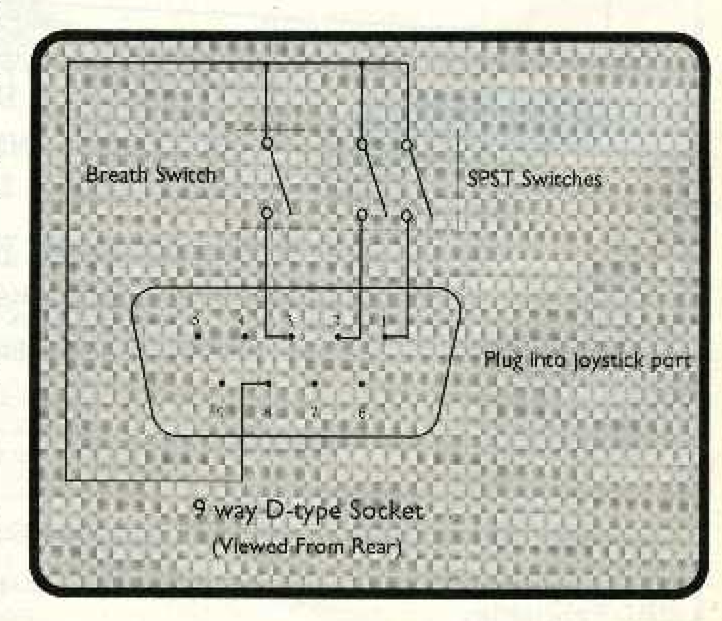
M. Hayes, Birmingham

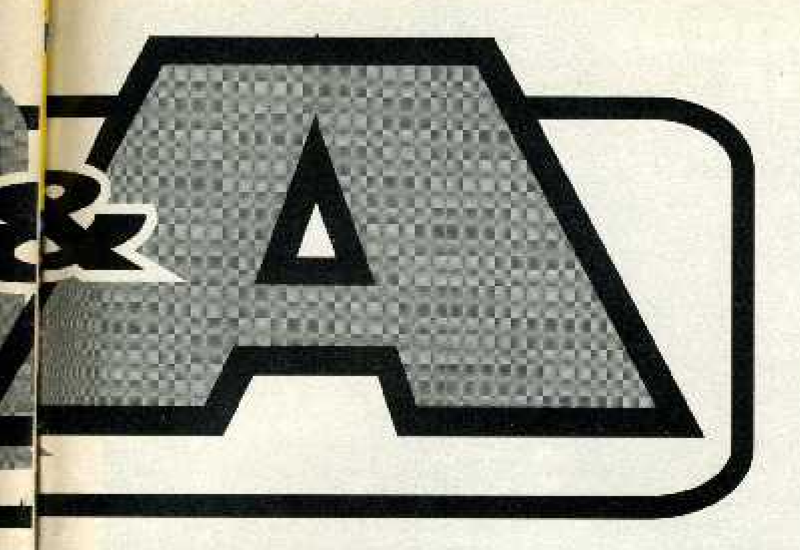
A I'm only too happy to help, especially for such a worthy cause. It's nice to see computers being put to good uses like this rather than simply playing arcade games. You'll be pleased to know that you needn't carry out anything so drastic as removing your keyboard! The best solution, certainly the easiest, quickest and cheapest, is to interface your three switch mechanisms to the joystick port. The only component you need buy is a 9 way D-socket, easily obtained from Maplin Electronics (order code RK61R, catalogue available from W.H.Smiths) or your local Tandy shop. Some wire and a soldering iron complete the list of tools.

Connect the wires as shown in the diagram (below),and all should be well. To test your three switches, type in and run the following code:

```
10 CLS
20 LOCATE 1,1
30 PRINT "Switch 1","Switch 2","Switch 3"
40 LOCATE 1,2
50 x=JOY(0)
60 FOR n=0 TO 2
70 IF (x AND 2^n)>0 THEN PRINT "On", ELSE PRINT "Off",
80 NEXT n
90 GOTO 40
```

As you trigger each switch you should see a change from 'on' to 'off' or vice versa. The best way to incorporate this detection logic into your own programs is by





NICAL

tA

writing a small subroutine:

```
1000 '— Read Switch —
1010 sj=JOY(0)
1020 IF (sj AND
2^(switch+1))>0 THEN state=1
ELSE state=0
1030 RETURN
```

Simply set the 'switch' variable to 1,2 or 3, depending on which switch you wish to test, then GOSUB 1000. The variable 'state' will subsequently contain a 1 (on) or an 0 (off) indicating whether the switch is currently activated. I hope this information is of use to you and that your project succeeds.

Q I am writing to you to ask for three bits of information. 1. I think you will be able to provide, and I will be very pleased if you do. 2. I am sure you can provide; and the third, you might not be able to provide, and probably won't be of any use. So here goes:

1. I have purchased the SPO256 speech synthesiser chip and would like to know how to program the expansion port to make it work. Please could you be very clear and detailed in your answer.

2. Short and sweet. How does a mouse work? Which electronic components does it have in it?

3. A nice idea! Would it be possible to make a memory expansion for the 6128? If so, then how much could you expand the memory by? I know that you can buy 256K expansions, but what about 1 chip of 1M, which you can buy from Maplin? Could it be done on similar lines to the Brunword ROM, which in future might be able to have ROMs added to it, which you can program as once programmable memory, but with RAM in it, used as random access memory? If it would be possible could you please include a circuit or at least a block diagram? Would it need driver circuitry, or software to work, or could the computer just accept it and use it? (I doubt this even more than the basic idea!). If you can have RAM on the back of the machine, then could you replace it with a ROM, and so program it, and then use the program on the ROM, as you would a ROM in a ROM board? What about putting 2 1Ms on the back!!!? P.S. Does the Amstrad use the Z80A or Z80B, i.e. 4MHz or 6MHz?

Arthur Butler, Thrisk

A Phew! My head's still spinning with the thought of all those RAMs and ROMs! Back to your first question, despite being quite a clever little device, the SPO256 requires a fair amount of additional circuitry before it will do anything useful. The description of it in your Maplin catalogue includes quite a handy circuit diagram for the crystal oscillator, amplifier, and the various filters that enable the speech sounds to be heard. In addition to this, you will also need to design a suitable array of logic gates to decode a single memory address from the sixteen address lines, detect a falling edge on the WR (write) line, and connect the data bus directly to the SPO256. All in all, quite a bit of work but it's certainly possible. You might like to consider building the I/O port described in ACU July/August '91. That takes care of interfacing to the expansion port, and could be connected straight to the Maplin circuit. The entire project could be viewed as an excellent learning exercise in computer interfacing and analogue/digital circuit design, but if your objective is simply to obtain a working speech synthesiser then a commercial one is probably a better choice. This will also include the necessary driver software. My advice would be to consider buying Datel's offering which, incidentally, is based around the SPO256 and also functions as a stereo amplifier - it's far easier, neater and cheaper.

There are essentially three types of mouse design, mechanical, opto-mechanical, and optical. The first is prone to wear and tear and this design is no longer favoured, while the third is more expensive (due to its improved accuracy) and is generally kept for CAD work or UNIX machines. Opto-mechani-

cal types are a good compromise and enjoy wide support among mouse manufacturers. The basic principle of its operation is that a small rubber ball, fitted snugly into the base of the mouse, rolls as the mouse is moved around the desktop by the user. Two small rollers, kept in tight contact with the ball, are aligned so that one only detects x-axis movements, i.e. left-right, while the second is only moved by y-axis motion, i.e. forward-backward. Each roller drives a small disc with many slots in it which passes through a tiny beam of infra-red light. As a roller rotates (indicating mouse movement in its particular direction) the slotted disc generates a series of pulses in an infra-red light detector due to it repeatedly breaking the beam. The speed of the pulses is proportional to mouse velocity while the ratio of X to Y indicates direction. As far as the computer is concerned, every time it receives a train of pulses the pixel position of the screen pointer is updated.

Expanding computer memory is tricky at the best of times but is particularly difficult with the Z80 as its design inherently limits it to 64K. To access memory above this requires a fair amount of fiddling. The 6128 splits its memory into two separate banks of 64K, only one of which can be accessed at any one time. In reality, only one 16K 'page' of the second bank is ever switched in/out at once. A similar system operates for 256K expansions. The process of switching banks has to be handled by custom-written software,

TECHNICAL Q&A

and the final operation isn't exactly seamless. Probably very few 6128 owners utilise the extra memory themselves, simply because it's so awkward. BASIC programs are still limited to 64K and the only really easy way to make use of the extra is to use it to store screens. Of course, many commercial programs, e.g. Brunword 6128 do utilise it but this requires a lot of complicated machine code and some careful program design.

The 1M dynamic RAM you mention is actually 1Mbit not 1MByte. This means that it can only store 128K of information. Static RAM is the easiest to interface as it immediately responds to an address input by outputting eight bits of data. Dynamic devices require a row/column address and may not output all eight bits together. They also require a refresh signal fairly frequently in order to prevent the loss of any stored information. Once again I'm afraid you'd be better off sticking to commercial memory expansions.

As for your other idea, this sounds similar to a product marketed by Microstyle known as 'RamRom' (£13.95). It's basically a battery-backed 32K RAM chip which combines the advantages of easy RAM access with permanent ROM storage. Programs (including BASIC ones) may be stored in this device even while the computer is switched off. Upon powering up the intact program can be run as normal but, unlike a conventional ROM, stored data can be readily altered/erased when the need arises. Finally, all Amstrad CPCs and Plus machines incorporate a Z80A clocked at 4MHz, and before you ask, I wouldn't recommend trying to upgrade it!

Q My maths teacher told me that computers do not generate totally random numbers. If this is true then what does the RND command do, and how would computer games manage to create random baddies etc.

Mark Lodge, Durham

A The bad news is that your teacher is absolutely correct, computers can only produce 'pseudo-random' numbers. They may appear to be pretty random to the casual observer but they do in fact follow a predetermined list. Storing such a long list would be impractical so any number on it can be generated using a clever software algorithm encoded in the machine's firmware. To demonstrate this, reset your computer and type PRINT RND [press return] two or three times to get a few supposedly random numbers. Now repeat the exercise and you should get exactly the same numbers. This is because the computer is starting at the same place on the list each time. To determine the starting position, the RANDOMIZE command may be used. Unfortunately, to start at a random place requires a random number so you end up going round in circles! The best way out is to type RANDOMIZE TIME as the TIME variable is unlikely to be the same twice.

PROGRAMMING Q&A

Q I use a 6128 with Protext, Promerge and Utopia ROMs and a DMP 3000 printer. I have written a BASIC program to help me learn Spanish and have re-configured the &'_=£ keys to produce accented Spanish vowels using the SYMBOL commands. Protext has the facility to produce some Spanish characters but not accented vowels. My problem comes when I try to produce the characters on the printer - Protext can be configured to do the job (as above) by using a control code to backspace the printer but this is not consistent with the re-configured keyboard. I have tried to define the characters I need for the printer using the instructions in the DMP 3000 manual - not easy to follow!! After much trial and error I managed to get them to line up with the rest of the text. The accented characters all line up about half a character depth lower than the unaccented characters.

The printer manual makes reference to the descender bit in the 'attribute' parameter sent to the printer at the start of the program. This is the eighth (most significant) bit and has to be set to 1 in order not to descend. Nowhere in the manual does it say what this 'descending' refers to, but I suppose this is what is happening to my characters because of the loss of the eighth bit at the 6128's printer port. The DMP 3000 has a control code (ESC >) to set the eighth bit of every subsequent code sent to the printer to 1. I tried using this but it had no effect.

```
10 'Copy internal character
set to downloadset
20 PRINT#8,CHR$(27)+":"+
CHR$(0)+CHR$(0)+CHR$(0)
30 'Download character
definition
40 PRINT#8,CHR$(27)+"&"+
CHR$(0)+CHR$(5)+CHR$(5)+
CHR$(187);
50 FOR d=1 TO 11
60 READ n
70 PRINT#8,CHR$(n)
80 NEXT d
90 'Download character set
definition
100 PRINT#8,CHR$(27)+
"%"+CHR$(1)+CHR$(0)
110 'Control code printing
selection
120 PRINT#8,CHR$(27)+
"I"+CHR$(1)
130 'Print out the finished
download character
140 FOR p=1 TO 20
150 PRINT#8,CHR$(5);CHR$
(97);
160 NEXT p
170 PRINT#8,
180 'Data for character
190 DATA 2,5,16,5,16,37,80,
14,1,0,0
```

I had given up on this problem, assuming it was down to the printer port. In the meantime I had ordered a 6128+ which I wanted as backup for the other machine. I thought that the plus machine with its eight bit printer port would solve this particular problem but not so! It made no difference. Can you help please? I have done some fiddling with the DIP switches on the printer but the manual is not all that helpful on these either. I expect I am missing something obvious.

A second question: Is there any way I can avoid having to press keys to reject 'Burning Rubber' every time I switch on the 6128+? I have only had the machine for a few days and this is already a major annoyance.

Ian Russell, Argyll

A Printing foreign characters is always a bit of an ordeal. Thankfully, once you've configured your setup that's generally all there is to it, so don't lose heart! You seem to be attacking the problem the right way but there are a couple of minor flaws in your program. Firstly, you are redefining character number five which is a control code and thus best left alone. Why not redefine the & character (followed by '_=£) in order to be consistent with your Protext key changes? Simply alter line 40 in the test program to:

```
40 PRINT#8,CHR$(27)+"&"+
CHR$(0)+CHR$(38)+CHR$(38)+
CHR$(187);
```

Secondly, the attribute byte - CHR$(187) in line 40 - which you have correctly set, may be being misinterpreted by the printer due to the CPC's seven bit printer port. If this attribute byte has a value of 128 or more (i.e. bit 7 is set), then the character uses the print head's top eight pins; for values less than 128 the bottom eight bins are used. The remaining seven bits are used to determine the width of the character for proportional spacing; 187 indicates that the character starts in column 3 and ends in column 11. Because only seven bits of data are being sent from the printer port, this attribute byte will always be interpreted by the printer as indicating a descending character, hence your misalignment problem.

In many instances, a cure for this type of problem is to use the ESC+">" control sequence to automatically set the eighth bit high on all subsequent bytes, until a ESC+"=" sequence is received. Unfortunately, it is impossible to carry out this procedure in the middle of line 40 (just before CHR$(187)) as the printer would read the attribute byte as character 27 (ESC). Nesting one control sequence within another just isn't possible. I'm afraid the solution is to purchase an 8-bit printer port for your standard CPC, or else use your 'plus' machine. Both the 464+ and the 6128+ definitely have 8-bit ports but, since you're not the first reader to have experienced problems with it (see last issue's Q&A query from Adam Lloyd), I'm beginning to wonder if the BASIC/Firmware supports it without first running some sort of a patch - can any other readers shed some light on this? Meanwhile, ensure that your printer's DIP switches are set to receive 8-bits. My own printer uses DIP 4 to toggle between seven and eight bit modes.

Answering your second question: unfortunately there isn't, as the Locomotive BASIC is in the EPROM!

Q A lot of computer programs give the appearance of movement. I have tried to make a wheel rotate but find that drawing and re-drawing the spokes makes the speed of rotation slow. Is there any other way?

R.Wheeler, Birmingham

A Yes. The answer is to use colour switching techniques. The ink of the pens used to draw the wheel spokes are changed in a certain order. This gives the illusion of rotation, as the example below.

```
10 REM Rotating Wheel
20 MODE 1:INK 0,0:REM Four colour mode. Paper black
30 REM Draw the wheel
40 FOR wh=-PI TO PI STEP PI/32:REM 64 Spokes
50 MOVE 320,200:REM Move to the middle
60 colour=(colour+1) MOD 3:REM colour=0, 1 or 2
70 DRAW320+(200*SIN(wh)), 200+(200*COS(wh)),colour+1:REM Draw spoke
80 NEXT wh
90 REM Rotate wheel / Colour switch
100 k$="":WHILE k$=""
110 INK 1,1:REM Change all on screen pen 1 to ink 1
120 INK 2,16
130 INK 3,26
140 GOSUB 1000:REM Short Delay
150 INK 1,26:REM Rotate the colours pen 1 becomes the pen 3 colour ETC.
160 INK 2,1
170 INK 3,16
180 GOSUB 1000
190 INK 1,16:REM As 3 colours are used the inks must be changed 3 times
200 INK 2,26
210 INK 3,1
220 GOSUB 1000
230 k$=INKEY$:REM Press any key to stop
240 WEND:END
1000 REM Short Pause
1010 pause=25:REM Change pause to change speed of rotation.
1020 FOR sp=1 TO pause:NEXT:RETURN
```

Q I wrote the train program in the April issue. I would love to be able to animate programs but I don't know how to do it. Is there a book I could buy which would teach me?

Mark Farrow, London

A Computer animation, hmmm, tricky. Any animation is obviously just a sequence of still images so your best bet is to look for books on computer graphics, which are much more common. If you wanted to create an animation of a rotating cube, for example, you must first be able to draw a 3D cube from any angle and any position in space.

There are a fair few books on graphics around, try to avoid the ones aimed at powerful computers that are filled with complex equations, looking out instead for books written for home computers. I can definitely recall reading a library book dedicated to creating graphics on CPCs but it's probably out of print by now. Don't worry if any books you find are targeted at other machines, e.g. BBCs, as the theory remains the same and any BASIC programs should be reasonably east to convert.

Try asking your local public library to conduct a search on 'interactive computer graphics' and you'll be surprised at just how many titles crop up. Another possible source is your local college/university which always have a good selection of computing books. I'd be happy to print a list of any suitable ones you find, as I'm sure they'd be of interest to other readers. Good luck!

Q Is there any way to check if the printer is available from within a program? I am writing a program which needs printer access but if the printer is not there the program crashes unless connected to a printer.

T.Bruce, Littlehampton

A To test if a printer is connected use the following line. If the variable 'online' is 0 then you have a printer which is ON-LINE; if 'online' is not zero then the printer is missing or not ON-LINE.

```
1000 REM Printer Test Subroutine
1010 online=INP(&F500) AND 64:REM Test the Parallel port
1020 IF online THEN PRINT "Printer Not Connected or On-Line":RETURN:REM return to the main program without attempting to print
1030 REM Your Print Out Routine.
```

Q I am writing a game which uses a INKEY$ within a loop (WHILE/WEND) to test which key is pressed. The arrow keys move an object around the screen but when you press a key to save the game a number of characters are placed onto the screen at the input prompt. How can I solve this?

J.Fairlove, Chatham

A Your problem seems to be the buffer. When using INKEY$, a small portion of memory is used to memorise the key presses and if you hold down a key this memory will be filled with that character. If the computer cannot carry out the operations which you have set it within the loop, additional key presses are memorised in this memory buffer. You could change the auto-repeat speed of the keyboard using SPEED KEY but this will mean that you have to repeatedly press the keys, what you want in this case is to clear (flush) the buffer. I have a number of routines which flush the buffer, but all have slight problems with 464 and 6128 compatibility so I would recommend the simple solution below.

```
10000 REM Flush the buffer (Simple)
10010 REM Before you use INPUT, LOAD and SAVE when using INKEY$ Flush the buffer.
10020 amount=20:REM This number may need to be changed by experimentation. Always try to use the lowest possible number for speed.
```

```
10030 FOR flush=1 TO amount
10040 CALL &BB1B:REM Remove one character from the buffer
10050 NEXT flush
10060 RETURN
```

Include this sub-routine in your program and call the sub-routine before allowing any INPUT. The variable 'amount' needs to be as small as possible. I have found in most cases taking 20 characters from the buffer is sufficient.

Q I am trying to write a football results game and would like to know how to reproduce a tele-printer effect where the results are placed on the screen one character at a time. Can you please help?

B.Knox, Arbroath

A Here is a short program to take any string and place it on the screen in the good old tele-printer way. The code is written as a sub-routine and you will need a line (as below) when you wish to use it. As there are many ways to develop a string (Arrays, Read/Data) the string which is used by the sub-routine must be set to equal your string.

```
190 REM Example string
200 your$="This is a tele-type message"
210 REM This line would be in your program when you wanted to use the tele-type
220 tele$=your$:GOSUB 3000:REM set tele$ to your$ for the sub-routine
230 your$="Manchester United 5 Stockport County 10":REM Well you never know!
240 tele$=your$:GOSUB 3000:REM Message 2
250 END
3000 REM Tele-Type Message Printer
3010 FOR char=1 TO LEN(tele$):REM A loop for each character in tele$
3020 char$=MID$(tele$,char,1):REM Make char$ equal to the next character in the string
3030 PRINT char$;:REM Print the character
3040 SOUND 1,4000,5,7,1,1,1:REM Produce a noise
3050 FOR pause=1 TO 100:NEXT pause:REM A short pause
3060 NEXT char
3070 PRINT:REM Allow the next string to start on a new line
3080 RETURN
```

Q I am writing a program where I would like the keyboard to be set initially to CAPITAL letters. At the moment, I have a request to the user to press the Caps Lock key in the program. Is there any way of changing to upper case from within a program?

S.Crowther, Liverpool

A Yes there is a POKE which will place the keyboard in the Caps Lock condition as below. The address is different for the 464 and 6128 so here are the two POKES:

```
1000 POKE &B4E8,255:REM Upper Case (FOR 464). Change 255 to 0 for Lower Case

1000 POKE &B632,255:REM Upper Case (FOR 6128). Change 255 to 0 for Lower Case
```



Most have heard of the WAVE widget - it converts the PLUS's D connector to an edge connector. The Flexi Extendi does the same job, but uses a ribbon cable. Well, has anyone heard of a Reversi Flexi Extendi? It is a widget in reverse - it adapts an edge connector socket to a D connector socket.

I upgraded my 6128 for a 6128+. I purchased a widget so that I could use my Microgenics ROM board and also bought a Brunword ROM. The Brunword doesn't have a through connector so I had to constantly connect (and unconnect) alternate units so that I could use them. That is until the Reversi came along from Dartsma PD - I actually asked them to make it for me! Now I can plug both at the same time and they not only seem to be fine, but the Utopia ROM commands work from within Brunword too!

Chas Betts, Southampton

To transfer PCW discs to the CPC, I find a little PD program a marvel. READPCW is the little darling, but there is a problem with running some of the progs (CP/M of course). As the PCW's screen is a little bigger than the CPC's, some programs give tatty displays. Apart from that it's easy peasy!

Pete Dunlop, Avon

I've written a short program which produces mirror writing of any text in normal or italics. Calculating the poke locations for the italics in MODE 1 was a real pig 'cos each character is effectively split into two parts. I'll leave someone else to work out the algorithms for mode 0!

Tim Wheeler, London

```
100 'MIRROR: BY T WHEELER: 31.1.92 : Prints a mirror image of text in the centre of line selected in normal or italic style in mode 1 or 2

110 BORDER 3:INK 1,24:INK 0,1:MODE 1:PEN 1:PRINT"Enter text to mirror":PEN 3:INPUT" ",word$:x=LEN(word$):

120 PRINT"Enter MODE 1 or 2 ":PEN 3:INPUT" ",mde:e=2/mde:y=INT(((40*mde)-x)/2):PEN 1:IF mde<1 OR mde>2 THEN 120

130 PRINT"Enter n(ormal) or i(talics) ":PEN 3:INPUT" ",k$:k$=UPPER$(k$):PEN 1:IF NOT(k$="N" OR k$="I") THEN 130

140 PRINT"Enter line on which to print (1-23) ":PEN 3:INPUT" ",lin:PEN 1:IF lin<1 OR lin>23 THEN 140

150 PRINT"Enter Colour No. (27 for no change) ":PEN 3:INPUT" ",col:PEN 1:IF NOT(col>-1 AND col<28) or col=2 THEN 150 ELSE IF col<>27 THEN INK 1,col

160 MODE mde:LOCATE y,lin:z=&C000+(&50*(lin-1))+((y-1)*e):PRINT word$: IF k$="N" THEN 200 ELSE IF mde=2 THEN 210

170 FOR j=1 TO x*2:y=4:FOR i=0 TO 7:n=(z+&50+j-1)+((7-i)*&800):IF i<4 THEN n=n-1

180 m=n-1:p=PEEK((z+j-1)+(i*&800)):q=VAL("&X"+MID$(BIN$(p,8),y,5-y)+STRING$(3+y,"0")):r=VAL("&X"+LEFT$(BIN$(PEEK(m),8),4)+"0000"):POKE n,q:POKE m,r:y=y-1:IF y=0 THEN y=4

190 NEXT i,j:END

200 FOR j=1 TO x*e:FOR i=0 TO 7:p=PEEK((z+j-1)+(i*&800)):n=(z+&50+j-1)+((7-i)*&800):POKE n,p:NEXT i,j:END

210 FOR j=1 TO x:FOR i=0 To 7:n=(z+&50+j-1)+((7-i)*&800)):m=n-1

220 p=PEEK((z+j-1)+(i*&800)):q=VAL("&X"+RIGHT$(BIN$(p,8),i+1)+STRING$(7-i,"0")):r=VAL("&X"+BIN$(PEEK(m),8)) OR VAL("&X"+STRING$(i+1,"0"))+LEFT$(BIN$(p,8),7-i)):POKE n,q:POKE m,r:NEXT i,j:END
```

HASTA LA VISTA TILL NEXT MONTH

DON'T MISS





THE GREAT CPC ADD-ON GUIDE: What hardware gizmos can be added to the CPC, how much will it cost, and where to get it? All these questions, and more, answered. Be there!

CPC ANSWERS: Another dumpling-sized helping of technical advice and tips

REVIEWS: THE ADDAMS FAMILY and lots more...

COMPLETE CONTROL: Rainbow Islands - the final islands beaten!

plus

All the regulars - The Dungeon, Public Sector, Amy's PM&T, Poster Power, and loadsa tutorials

AUGUST ISSUE ON SALE: 4th July 1992

CPC ATTACK - TAKE IT UZI BABIES...WE'LL BE BACK...

SURVEY

WANTED
Your honest opinion of CPC ATTACK!

Every month you'll be able to tell us exactly what you think of CPC ATTACK! We'll be locked up one day a month studying the mini-surveys at great length to further improve the mag. Impossible, you may think - we do too but we'll try anyway.

1
Which machine do you own?
- CPC464 ☐
- CPC6128 ☐
- CPC464 PLUS ☐
- CPC6128 PLUS ☐
- CONSOLE (please specify) ☐

2
Do you own any of the following?
- 64k MEMORY EXPANSION ☐
- TAPE DRIVE ☐
- 3in. DISC DRIVE ☐
- 3.5in. DISC DRIVE ☐
- HARD DRIVE ☐
- PRINTER ☐
- ROMBOX ☐

3
How do you rate CPC ATTACK!?
- Bogus ☐
- Excellent ☐
- Not bad ☐
- Crap ☐
- Extreme ☐

4
Would you like to see a cover-mounted TAPE (not disc)
- With games ☐
- With programs ☐
- With both ☐
- No Thanks ☐

5
How did you rate the following:
- COVER ..../10
- COMPETITION ..../10
- CONSOLE CRAZY/SUPER NES ..../10
- PUZZLE COVER-MOUNT ..../10
- ART ATTACK! ..../10
- GAME REVIEWS ..../10
- POSTER ..../10
- MULTIFACE REVIEW ..../10
- Q&A ..../10
- LETTERS ..../10
- NEWS ..../10
- THE DUNGEON ..../10
- PUBLIC SECTOR ..../10
- COMPLETE CONTROL ..../10
- BASIC TUTORIALS ..../10
- DEMO TUTORIAL ..../10
- SPECIAL OFFERS ..../10
- THE ISSUE OVERALL ..../10

6
Please rate out of 10 this and any other magazines you read (they don't have to be computer related):
- CPC ATTACK! ..../10
- ACU ..../10
- AMSTRAD ACTION ..../10
- ..../10
- ..../10

7
What would you like to see in a future issue of CPC ATTACK!?
I would like to see...

Send your surveys to:
JULY SURVEY,
CPC ATTACK!,
HHL PUBLISHING, GREATER LONDON HOUSE, HAMPSTEAD ROAD, LONDON NW1 7QQ.
or FAX 071-387 9518



125+

- Four ultra-sensitive fire buttons
- Ergonomically designed control handle for supreme comfort
- Auto-fire function
- Heavy duty base with strong stabilising suction cups
- +2/+3 selector connector
- 8 directional control
- Automatic centering
- High impact robust body
- Compatible with Sinclair Spectrum +2/+3, Commodore, Atari and Amstrad computers and video game systems.
- **Sega Master Series version available**

• ONLY £9.99



STAR PROBE

- Four ultra-sensitive microswitched fire buttons
- Ergonomically designed custom control handle for supreme comfort
- Auto-fire function
- Indestructible metal shaft
- Ultra-light 8 directional microswitched control
- Heavy duty base with strong stabilising suction cups
- +2/+3 selector connector
- Automatic centering
- High impact robust body
- Compatible with Sinclair Spectrum +2/+3, Commodore, Atari and Amstrad computers and video game systems.

• ONLY £14.99

MACH I

- Four ultra-sensitive fire buttons
- Ergonomically designed control handle for supreme comfort
- Auto-fire function
- Indestructible metal shaft
- Ultra-light 8 directional microswitched control
- Heavy duty base with strong stabilising suction cups
- Automatic centering
- High impact robust body
- Compatible with Commodore, Atari and Amstrad computers and video game systems.

• ONLY £12.99

EXTERMINATOR

- Two ultra-sensitive fire buttons
- Ergonomically designed control handle
- 8 directional control
- Automatic centering
- Heavy duty base with strong stabilising suction cups
- High impact robust body
- Compatible with Commodore, Atari and Amstrad computers and video game systems.

• ONLY £6.99

TURBO FIGHTER

- Ergonomically designed for supreme comfort
- 2 ultra-sensitive fire buttons
- Heavy duty base with strong stabilising suction cups
- Robust clamp for secure desktop mounting
- 8 directional control
- Automatic centering
- High impact rugged body
- 'X' and 'Y' axis trim controls
- Additional Joystick 8 'Y' axis control (for PC users only)
- Analogue to digital converter included for compatibility with PCs as well as Amiga, C64, Atari ST, Amstrad CPC etc.

• ONLY £49.99

CHEETAH





THE BUG

- Ergonomically designed body for supreme comfort
- Suitable for right or left hand
- 2 ultra-sensitive microswitched fire buttons
- Auto-fire function
- 8 directional microswitched control
- Indestructible metal shaft
- Automatic centering
- +2/+3 selector connector
- Compatible with Sinclair Spectrum +2/+3, Commodore, Atari and Amstrad computers and video game systems.

• ONLY £14.99

THE NEW GENERATION IN JOYSTICK TECHNOLOGY

- 12 month warranty on all products shown.
- Older computers may require interfaces and/or adaptors – not included.
- Prices include VAT, postage and packaging.
- Dealer enquiries welcome.
- Cheetah products available from branches of



CURRYS SUPERSTORE
Dixons
Harrods
John Menzies
WH SMITH
Tandy
TOYS R US

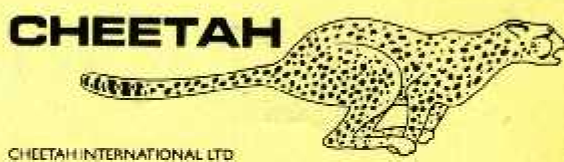
High Street stores and all good computer shops.

THE TORTOISE

- Three ultra-sensitive fire buttons
- Ergonomically evolved control shell
- Automatic centering
- Heavy duty body with strong stabilising suction feet
- 8 directional movement
- Cage sold separately
- Versions include ZX Spectrum, 16K, 48K, 128K, (interface sold separately), +2, +3, C64, Amstrad, Atari, Sega and Nintendo.

• ONLY £9.99

All specifications and prices subject to change without notice



CHEETAH INTERNATIONAL LTD
Cheetah House, Bedwas Business Park, Bedwas, Gwent NP1 8DU
Tel: 0222 – 867777 Fax: 0222 – 865575